

Smithsonian Institution Northern Grid, Survey No. 37,
18 to 23 February, 1967.

INTRODUCTION

The grid was surveyed this month by Pacific Program personnel, Robert DeLong (Biologist-in-Charge), Ralph W. Schreiber, and John Fitch. The grid track was changed (see Figure 1) due to insufficient time and logistical problems encountered during the survey. LT 2087 (Light Tug) accompanied the USS George Eastman during a portion of the survey, but heavy seas forced it to put into Johnston Island on 20 February. Excellent cooperation was received from officers and crew of both vessels.

Diurnal observations for 62 hours, traversing 595 miles, accounted for 393 birds of 13 species. During 56.2 hours of nocturnal observations 312 birds of 5 species were recorded.

The species present and their spacial distribution in the grid suggest high dependancy on Johnston Atoll. The North and East Quadrants (those closest to Johnston Atoll) contained 89% of the diurnal grid observations.

SPECIES ACCOUNTS

Diomedea nigripes (Black-footed Albatross) 1

One bird was seen on 19 February in the south quadrant of the grid. This bird stayed with the ship for only a few minutes.

Albatross began following the ship just two miles outside Pearl Harbor, surprisingly close to land. This may have been caused by the high winds in the offshore Oahu waters at that time. Most of the non-grid sightings (82%) were within 200 miles of Oahu.

Pterodroma externa externa (Juan Fernandez Petrel) 1
P. e. cervicalis (White-necked Petrel) 1

One bird of each race was seen. The Juan Fernandez race was seen in the north quadrant and the White-necked race was seen in the eastern quadrant. None was seen outside the grid.

Pterodroma rostrata/alba (Tahiti/Phoenix Island Petrel) 6

The six seen were evenly distributed throughout the grid. Four birds were seen while enroute to the grid.

Pterodroma hypoleuca 2

Two birds of this species were seen on 19 February in the south quadrant. They were not identified to race.

Oceanodroma leucorhoa (Leach's Storm Petrel) 6

Six white-rumped storm petrels were recorded. All were probably of this species. They were found in each quadrant of the grid.

Puffinus nativitatus (Christmas Island Shearwater) 1

One bird was seen on 22 February in the West quadrant.

Sula leucogaster (Brown Booby) 3

Three were seen in the north quadrant.

Sula dactylatra (Blue-faced Booby) 4

The four Blue-faced Boobies recorded were sub-adult birds. One was collected.

Sula sula (Red-footed Booby) 41

Forty-one Red foots were recorded. Six were adults, 12 subadults, and 23 immatures. Again this month the immatures are the most abundant age class.

The abundance of Red-foots apparently can be correlated with high winds. During periods of high winds fewer boobies return

to Johnston Island to roost (see recent bi-weeklies from Johnston Atoll). They probably "find it easier to remain" on the wing when it is windy, and are able to stay aloft at night with less expenditure of energy than during calm weather. During the grid survey there were markedly lower roosting populations on JI. Data on the effects of wind on the JI bird populations are being analyzed elsewhere.

One Red-foot was collected.

Phaethon rubricauda Red-tailed Tropicbird 3

All three birds were seen on 21 February in the West Quadrant.

Phaethon lepturus White-tailed Tropicbird 9

Birds were seen in each quadrant but two-thirds were sighted on the eastern side of the grid on 18 and 19 February.

One bird was collected.

Fregata minor Great Frigatebird 15

The fifteen frigates were seen throughout the grid, but were concentrated in the North and East quadrants. Wind probably has a similar influence on the frigates as it has on the Red-footed Booby.

Sterna fuscata Sooty Tern 291

During diurnal observations all 291 Sooties were seen in the North and East quadrants. Ninety-nine percent of the Sooty observations were birds in flocks. All observations were close to Johnston Island where the birds were beginning to nest. They apparently were not going far from the island to feed.

Nocturnal observations accounted for 281 Sooties. All but four of these birds were recorded in the North quadrant on the night of 20-21 February when we re-entered the grid after leaving JI.

DISCUSSION

The survey data suggest two interesting hypotheses: 1) Sooty Terns were not ranging far south of JI to feed. This may be due to breeding activity on the island, but also may be influenced by the strong north easterly winds. Birds flying any distance south to feed would have to "battle" these winds getting back to the island at night. 2) Strong winds may cause Red-footed Boobies and Great Frigatebirds to move away from the island and to remain in the air rather than land as during calm weather.

Heavy north easterly trade winds ranging from 20 to 35 knots made observations difficult. Seas resulting from heavy winds reduced the effective radius of visibility and birds flying behind swells and waves would have been easily missed.

The analysis of the February data by quadrants can be misleading. Miles travelled in the quadrants varied from 113 to 188 miles. Because of this large variation in sample size, the parameter birds per linear mile is not comparative from quadrant to quadrant. Also, due to the low population of birds in the grid, the presence of a feeding flock in one quadrant throws total birds per linear mile for that quadrant out of proportion.

Tugs

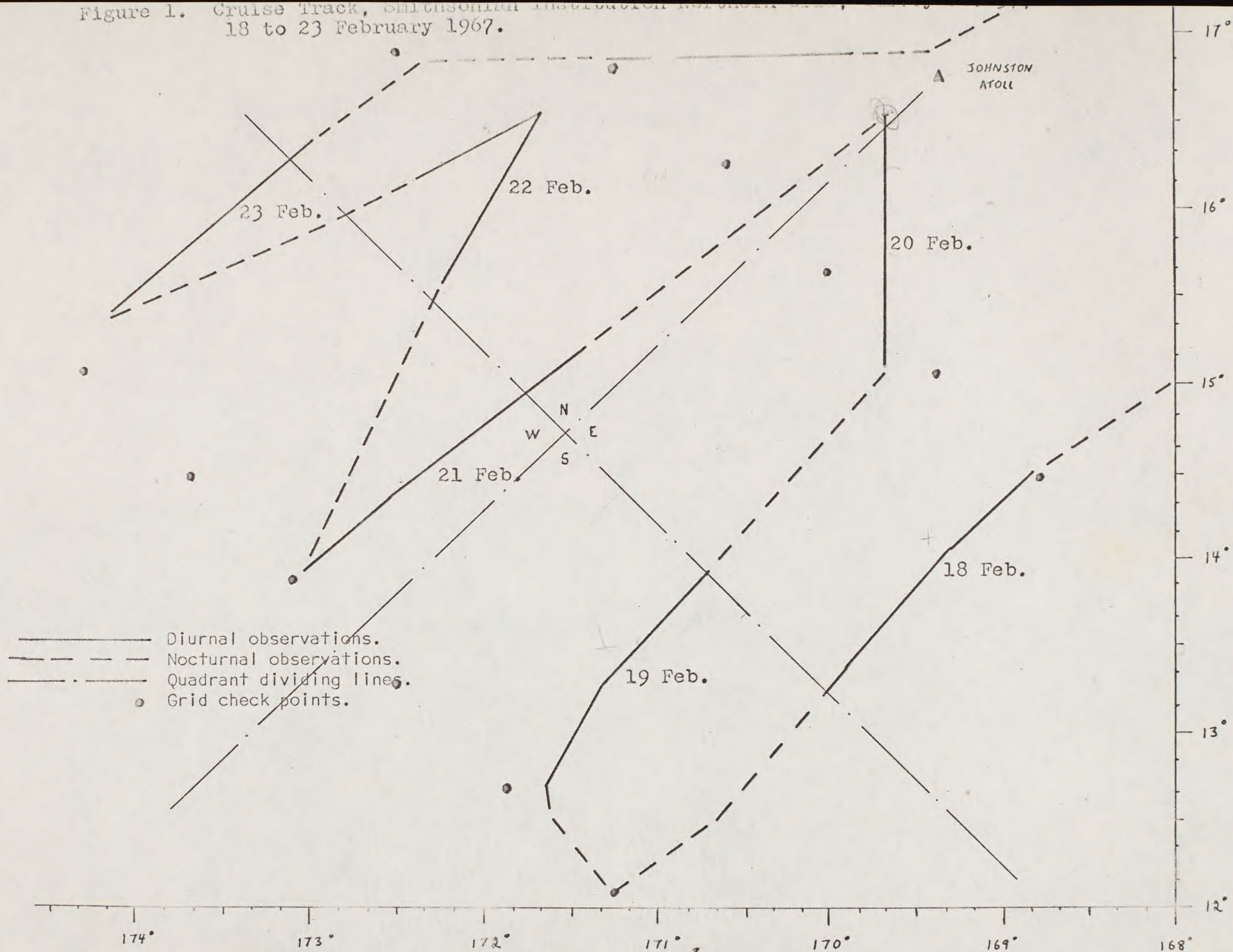
Observations were made from the LT* for two days. The first day while running with the seas this proved satisfactory. On the second day both ships were headed into building seas. Heading into the seas the LT was not at all stable. Its narrow beam causes it to plunge badly. Pitch and roll are very fast and make observing with glasses impossible. When higher seas are encountered the tug is taking so much spray and green water that all exposed decks are secured. It is argued by the tug crew that they can sail them in any weather, but keeping them afloat and being acceptable for biological observations are distinctly different. In seas below eight feet (including swell) the tug is satisfactory. In seas heavier than ten feet it is not possible to observe them.

Data from eight hours of dual diurnal observation on the YAG and LT indicate that given good sea conditions the observer on the LT sees at least as many birds as can be seen from the larger ship. These data also indicate that more birds may be seen from the smaller ship. There are two plausible explanations for this: First, the birds may avoid the larger ship as it presents a massive profile on the horizon. Secondly, the observer on the tug is closer to the water affording a better angle for observing low-flying birds. The lower angle presents a greater area of contrasting horizon (sea and sky) on which to spot birds.

In good sea conditions the LT seems particularly effective in approaching feeding bird flocks. This is never accomplished with the YAG, apparently due to its large size. The tug's greater maneuverability allows efficient pickup of downed birds. All collected birds were retrieved within five minutes.

*light tug.

Figure 1. Cruise Track, Smithsonian Institution Northern Grid, 18 to 23 February 1967.



SMITHSONIAN INSTITUTION NORTHERN GRID, FEBRUARY 18-24, 1967.

TABLE 1. SUMMARY OF DIURNAL OBSERVATIONS IN SMITHSONIAN NORTHERN GRID, FEBRUARY, 1967.

DATE	NUMBER OF BIRDS	SIGHTINGS	SPECIES	FLOCKS	MILES	HOURS	BIRDS/LINEAR MILE
18	216	25	7	4	113	11.8	1.91
19	28	23	8	-	99	11.7	0.28
20	2	2	2	-	25	3.3	0.08
21	12	12	7	-	129	11.8	0.09
22	127	20	9	2	134	11.7	0.95
23	8	7	3	-	95	11.7	0.08
TOTAL	393	89	13	6	595	62.0	

TABLE 2. DIURNAL DENSITY OF SPECIES GROUPS IN GRID, FEBRUARY, 1967.

SPECIES GROUP	# OF BIRDS	#/LINEAR MILE	#/MILE ²	EST. POP./ 50,000 SQ. MI.	% OF TOTAL BIRDS
Shear/Pet.	15	0.025	0.012	600	3.8
Storm Pet.	6	0.010	0.010	500	1.6
Boobies	48	0.081	0.040	2000	12.2
Tropicbirds	13	0.022	0.011	550	3.3
Frigatebirds	15	0.025	0.006	300	3.8
Terns	291	0.289	0.163	8150	74.0
Misc.	5	0.009	0.005	250	1.3
TOTAL	393	0.661	0.247	12,350	100.0

TABLE 3. SUMMARY OF NOCTURNAL GRID OBSERVATIONS, FEBRUARY, 1967

DATE	# OF MILES	# OF HOURS	# OF BIRDS	# OF SOOTY TERNS	# OF SPECIES
18-19	132	12.3	8	3	5
19-20	90	8.2	5	4	1
20-21	131	7.6	298	277	2
21-22	103	12.1	-	-	-
22-23	124	12.2	1	-	1
23	33	3.8	-	-	-
TOTAL	613	56.2	312	284	5

TABLE 4. DIURNAL ABUNDANCE BY GRID QUADRANTS, FEBRUARY, 1967.

	TOTAL BIRDS OBSERVED IN GRID	% IN FLOCKS	BIRDS/LINEAR MILE	EAST QUADRANT		SOUTH QUADRANT		WEST QUADRANT		NORTH QUADRANT	
				# OF BIRDS	#/LIN. MILE	# OF BIRDS	#/LIN. MILE	# OF BIRDS	#/LIN. MILE	# OF BIRDS	#/LIN. MILE
Black-footed Albatross	1		.002			1	.008				
Christmas Island Shearwater	1		.002							1	.006
Phoenix/Tahitian Petrel	6	33	.010	1	.008	3	.026			2	.012
Juan Fernandez Petrel	1		.002							1	.006
Pterodroma sp.	3		.005	2	.016					1	.006
P. hypoleuca	2		.004			2	.017				
White-necked Petrel	1		.002	1	.008						
White-rumped Storm Petrel	6		.010	1	.008	1	.008	1	.005	3	.018
PROCELLARIIFORMES	21	10	.037								
Brown Booby	3		.005					1	.005	2	.012
Red-footed Booby	41	10	.069	9	.072	13	.115	2	.010	17	.100
Blue-faced Booby	4		.006	1	.008	1	.008			2	.012
White-tailed Tropicbird	9		.015	2	.016	5	.044	1	.005	1	.006
Red-tailed Tropicbird	3		.005					1	.005	2	.012
Great Frigatebird	15	07	.025	5	.040	3	.026	5	.026	2	.006
TROPICBIRD SP.	1		.002							1	.006
PELICANIFORMES	76	07	.127								
Sooty Tern	291	99	.491	191	1.540					100	.589
CHARADRIIFORMES	291	99	.491								
Bird species	5		.010	1	.008	3	.026			1	.006
TOTAL			0.662		1.724		0.278		0.056		0.791
MILES				124		113		188		170	

NON-GRID OBSERVATIONS

Black-footed Albatross were recorded on 15 February just two miles outside Pearl Harbor. The following day there was but one bird, and on the third day none was seen. A similiar pattern held on the return trip.

Shearwater and gadfly petrel observations were limited to one Christmas Island Shearwater and four Tahiti/Phoenix Island Petrels. There was a notable lack of Wedge-tailed Shearwaters, Juan Fernandez Petrels, and small Pterodroma. Many of the Pterodroma are in the five degree north latitude waters at this time, but where are all the Wedgetails from the Hawaiian Islands?

Sooty and Gray-backed Terns were not evenly distributed in the waters between Oahu and the grid. Greatest numbers were seen close to the Hawaiian Islands, and around Johnston Island. Few terns were seen in the waters approximately midway between the island groups. This probably is a reflection of the breeding activity that is now beginning.

No Noddy Terns were seen in or outside the grid.

OBSERVATIONS OF BIRDS KNOWN TO BE PRESENT IN NUMBERS ON JOHNSTON ATOLL WHILE THE EASTMAN WAS WITHIN SIGHT OF THE ATOLL: While approaching JI from directly south during the afternoon of 20 February, no unusual numbers of birds were observed until approximately a half-an-hour before sunset when the ship hove to 15 miles south-west of the atoll. During the next hour over 150 Red-footed Boobies were counted flying toward the atoll. At sunset a tight flock of 25 birds was sighted but throughout this period and until dark a constant stream of birds passed the ship and it was difficult to differentiate flocks. Pairs and small groups of

three or four birds were common. The boobies sighted flew close to the water (none was seen above 30 to 40 feet) and all were flying "purposefully" toward the atoll. This was the major distinct directional movement observed during this cruise.

One serum sample was collected from a subadult Red-footed Booby which flew aboard the vessel. No specimens were collected outside the grid.

SUMMARY OF DIURNAL NON-GRID OBSERVATIONS, FEBRUARY, 1967.

DATE	15	16	17	20	24	25	26	27	28
Black-footed Albatross	4	1	-	-	-	1	6	16	17
Laysan Albatross	-	-	-	-	-	-	-	2	1
Christmas Island Shearwater	-	-	-	1	-	-	-	-	-
Phoenix/Tahitian Isl. Petrel	-	2	2	-	-	-	-	-	-
White-rumped Storm Petrel	3	-	-	2	-	1	1	-	2
Shearwater/Petrel	1	5	-	-	-	-	1	2	-
Brown Booby	1	-	-	-	-	-	1	-	-
Blue-faced Booby	-	-	-	1	2	-	-	1	-
Red-footed Booby	3	10	5	54	27	2	4	3	15
White-tailed Tropicbird	-	3	1	-	-	-	-	-	2
Red-tailed Tropicbird	1	-	-	1	-	-	-	-	1
Tropicbird sp.	1	1	-	1	-	-	-	-	-
Great Frigatebird	-	3	-	1	13	-	1	2	-
Pomarine Jaeger	16	-	-	-	-	-	-	-	10
Sooty Tern	116	121	96	215	180	-	37	16	178
Gray-backed Tern	9	-	-	-	-	-	-	-	18
Fairy Tern	6	3	-	3	6	-	-	6	4
Sterna sp.	160	-	-	-	-	-	-	-	-
Phalarope sp.	-	-	-	-	1	-	-	-	-

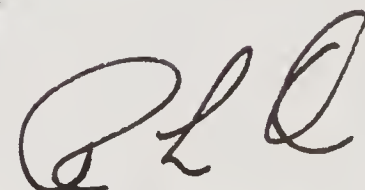
Hours of observation
Miles of observation

9.6	11.6	11.7	8.2	11.6	11.6	11.6	11.7	10.0
100	110	128	77	81	96	110	80	71

Totals:
97.6
853

The data that was taken from the tug during periods of duplicate observation has not been entered into the ADP system. Some of these LT data are entirely duplication, however some are sightings of separate birds. I do not think they should be entered, but leave the possibility open to you.

The positions on the green ~~minn~~ sighting cards should all be checked and completed for 24 to 28 February. The checking is necessary as a spot check turned-~~pp~~ errors.



R.L. DeLong

1967 NB
Date 15 FEB 1964 Ship USS GEORGE EASTMAN YAG 39 Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0702 Position: Lat. PEARL HARBOR, Long. _____

Sunset: Time 1837 Position: Lat. 20-25N, Long. 159-25W

Miles travelled from 0000 hours to sunrise = N/A

Miles travelled from ^{4/W}sunrise to sunset = 100

Miles travelled from sunset to 2400 hours = 63 MILES

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
-------------	-------------	----------	-----------

1.

2.

3. 1200 W LORAN 20-56N 158-27 W

4. 2000 W CELESTIAL 20-19N 159-37 W

5.

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
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0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800	21-14	158-02				
0900	21-11	158-05				
1000	21-07.5N	158-08W				
1100	21-02.8N	158-17.5				
1200	20-56N	158-27W				
1300	20-50N	158-36W				
1400	20-46N	158-45W				
1500	20-41.5N	158-54W				
1600	20-37N	159-03W				
1700	20-32.5N	159-11.7				
1800	20-28N	159-20.5W				
1900	20-23.5N	159-29.2W				
2000	20-19N	159-37W				
2100	20-13N	159-47W				
2200	20-07N	159-57W				
2300	20-01.3N	159-07.5				
2400	19-55.5N	160-18W				

Date 16 FEB 1967 Ship USS LEAHU EASTMAN (YAG-39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0714 Position: Lat. 19-13N, Long. 161-31W

Sunset: Time 1853 Position: Lat. 18-08N, Long. 163-04W

Miles travelled from 0000 hours to sunrise = 82

Miles travelled from sunrise to sunset = 110

Miles travelled from sunset to 2400 hours = 53.5

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 W	DR	19-55N	160-18 W
2.	0800 W	CELESTIAL	19-09N	161-38 W
3.	1200 W	CELESTIAL	18-46.5 N	162-00 W
4.	2000 W	CELESTIAL	18-01 N	163-14 W
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	19-44N	160-38 W				
0300						
0400	19-32N	160-58 W				
0500						
0600	19-20N	161-18.5 W				
0700	19-15N	161-28 W				
0800	19-09N	161-38 W				
0900	19-03N	161-44 W				
1000	18-57N	161-50 W				
1100	18-51N	161-55 W				
1200	18-46.5N	162-00 W				
1300	18-41 N	162-09 W				
1400	18-35 N	162-18 W				
1500	18-30N	162-27 W				
1600	18-24N	162-37 W				
1700	18	162-46				
1800	18-12N	162-55 W				
1900	06	163-09				
2000	18-01N	163-14 W				
2100						
2200	17-51N	163 33 W				
2300						
2400	17-40N	163-52 W				

Date 17 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0726 Position: Lat. 17-02N, Long. 165-02W

Sunset: Time 1810 X Position: Lat. 15-42N, Long. 166-45.5W

Miles travelled from 0000 hours to sunrise = 78

Miles travelled from sunrise to sunset = 128

Miles travelled from sunset to 2400 hours = 64

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 W	DR.	17-40N	163-52W
2.	0800 W	CELESTIAL	16-58N	165-08W
3.	1200 W	CELESTIAL	16-32N	165-43.5W
4.	2000 X	CELESTIAL	15-29N	167-03W
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	17-30N	164-11W				
0300						
0400	17-19N	164-30W				
0500						
0600	17-09N	164-49W				
0700						
0800	16-58N	165-03W				
0900	52	16				
1000	16-45N	165-25W				
1100	39	34				
1200	16-32N	165-43.5W				
1300	25	51				
1400	16-18N	166-01W				
1500						
1600	16-04N	166-18W				
1700	15-57	27				
1800	15-50N	166-36W				
1900	15-43	45				
2000	15-36N	166-54W				
2100	2100	15-29N	167-03W			
2200	2200					
2300	2300	15-18N	167-21W			
2400	2400	15-08N	167-39W			

Return clocks 1 hr.

1900
2000
2100
2200
2300
2400

Date 18 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0637 Position: Lat. 14-33N, Long. 168-41 W

Sunset: Time 1827 Position: Lat. 13-16N, Long. 170-03 W

Miles travelled from 0000 hours to sunrise = 69

Miles travelled from sunrise to sunset = 124

Miles travelled from sunset to 2400 hours = 61

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 X	DR	15-08N	167-39W
2.	0800 X	CELESTIAL	14-25N	168-48W
3.	0615 X	C/C TO 225°T	14-35N	168-38W
4.	1200 X	CELESTIAL	14-00N	169-21 W
5.	2000 X	CELESTIAL	12-56N	170-16 W

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	14-58N	167-58W				
0300						
0400	14-48N	168-19W				
0500						
0600	14-37N	168-36W				
0700	31	42				
0800	14-25N	168-48W				
0900	14-19N	168-56W				
1000	14-12N	169-04W				
1100	14-06N	169-12W				
1200	14-00N	169-21W				
1300	13-52N	169-28W				
1400	13-44N	169-35W				
1500	13-36N	169-41W				
1600	13-28N	169-48W				
1700	13-20N	169-55W				
1800	13-12N	170-02W				
1900	13-03N	170-09W				
2000	12-56N	170-16W				
2100	12-50N	170-24W				
2200	12-43N	170-33W				
2300	12-36N	170-44W				
2400	12-29N	170-50W				

SI
169 30
169 40

Date 19 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0648 Position: Lat. 12-33N, Long. 171-34W

Sunset: Time 1828 Position: Lat. 13-48N, Long. 170-50W

Miles travelled from 0000 hours to sunrise = 71

Miles travelled from sunrise to sunset = 99

Miles travelled from sunset to 2400 hours = 41

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 X	D.R.	12-29N	170-50W
2.	0325 X	c/c TO ^{314°} 045	12-04N	171-15W
3.	0800 X	CELESTIAL	12-43N	171-48W → c/c TO 045
4.	1200 X	CELESTIAL	13-11N	171-22W
5.	2000 X	CELESTIAL	13-55N	170-43W

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	12-16N	171-06W				
0300						
0400	12-12N	171-21W				
0500						
0600	12-28N	171-34W				
0700	12-35	171-41W				
0800	12-43N	171-48W				
0900	12-50	171-42				
1000	12-57N	171-35W				
1100	13-04N	171-29				
1200	13-11N	171-22W				
1300	13-16N	171-17W				
1400	13-22N	171-12W				
1500	13-27.5	171-07.5				
1600	13-33N	171-03W				
1700	13-38.5	170-58W				
1800	13-44N	170-53W				
1900	13-49.5	170-48W				
2000	13-55N	170-43W				
2100						
2200	14-07N	170-33W				
2300						
2400	14-18N	170-22.5W				

Date 20 FEB 1967 Ship GEORGE EASTMAN (YAG 35) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0641 Position: Lat. 14-54N, Long. 169-48.5

Sunset: Time 1822 Position: Lat. 16-32N, Long. 169-39W

Miles travelled from 0000 hours to sunrise = 49

Miles travelled from sunrise to sunset = 103 ⁻³²

Miles travelled from sunset to 2400 hours = 59

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	
1.	0000X	D.R. 14-18N	14-18N	170-22W	
2.	0800X	CELESTIAL	15-02N	169-40W	e/c 005°T FOR J.I.
3.	1200X	CELESTIAL	15-41N	169-39W	e/c 037°T
4.	1709X 2000X 1828X	OR CELESTIAL OR	16-27N 16-21N 16-33N	169-38W 169-53W 169-36W	e/c 230°T
5.					

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	14-23N	170-17W				
0200	14-28.5N	170-12W				
0300	14-34N	170-07W				
0400	14-40N	170-02W				
0500	14-44N	169-56				
0600	14-51N	169-51W				
0700	14-56	169-45				
0800	15-02N	169-40W				
0900	15-12N	40				
1000	15-22N	169-40W				
1100	15-31N	40				
1200	15-41N	169-39W				
1300	15-49N	39				
1400	15-57N	169-40W				
1500	16-06N	169-42W				
1600	16-14N	169-44W				
1700	16-22N	169-45W				
1800	16-30N	169-40W				
1900	16-25N	169-47				
2000	16-21N	169-53W				
2100	16-15N	170-02W				
2200	16-09N	170-10W				
2300	16-03	170-18				
2400	15-56N	170-27W				

Date 21 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0647 Position: Lat. 15-11N, Long. 171-26W

Sunset: Time 1831 Position: Lat. 14-07N, Long. 173-00W

Miles travelled from 0000 hours to sunrise = 72

Miles travelled from sunrise to sunset = 129 -24

Miles travelled from sunset to 2400 hours = 49

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	
1.	0000 X	D.R.	15-56N	170-27W	
2.	0800 X	CELESTIAL	15-03N	171-36W	
3.	1200 X	CELESTIAL	14-36N	172-12W	
4.	1800 X	DR	13-55N	173-02W	c/c to 035°T
5.	2000 X	CELESTIAL	14-15N	172-51W	

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100	15-49	170-35				
0200	15-42N	170-43W				
0300	56	-52				
0400	15-30N	171-01W				
0500	15-24	171-09W				
0600	15-18N	171-18W				
0700	15-11	171-27W				
0800	15-03N	171-36W				
0900	14-57	171-45W				
1000	14-50N	171-54W				
1100	14-43	172-03W				
1200	14-36N	172-12W				
1300						
1400	14-23N	172-30W				
1500						
1600	14-09N	172-45W				
1700	14-02	172-54				
1800	13-55N	173-02W				
1900						
2000	14-15N	172-51W				
2100						
2200	14-21N	172-45W				
2300						
2400	14-46N	172-37W				

Date 22 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0645 Position: Lat. 15-33N, Long. 172-13W

Sunset: Time 1834 Position: Lat. 16-18N, Long. 172-28W

Miles travelled from 0000 hours to sunrise = 54

Miles travelled from sunrise to sunset = 134

Miles travelled from sunset to 2400 hours = ~~62~~ 56 - 30

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 X	DR	14-46N	172-37W
2.	0800 X	CELESTIAL	15-43N	172-07W
3.	1200 X	CELESTIAL	16-19N	171-45W
4.	1345 X	DR	16-35N	171-36W
5.	2000 X	CELESTIAL	16-00N	172-41W

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	15-01N	172-30W				
0300						
0400	15-15N	172-21W				
0500						
0600	15-29N	172-14W				
0700	15-36	172-10.5				
0800	15-43N	172-07W				
0900	15-47	172-01				
1000	16-01N	171-55W				
1100	16-10	171-50				
1200	16-19N	171-45W				
1300	16-26	171-42W				
✓ 1400	16-34N	171-38W				
✓ 1500	16-29	171-48				
✓ 1600	16-23N	171-58W				
1700	16-18	172-10				
✓ 1800	16-12N	172-21W				
1900	16-06N	172-31				
✓ 2000	16-00N	172-41W				
2100	15-56	172-50				
2200	15-52N	173-00W				
2300	15-48N	173-10				
2400	15-43N	173-20W				

Date 23 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0653 Position: Lat. 15-26N, Long. 174-05W

Sunset: Time 1835 Position: Lat. 16-28N, Long. 172-50W

Miles travelled from 0000 hours to sunrise = 68

Miles travelled from sunrise to sunset = 95

Miles travelled from sunset to 2400 hours = 45

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000X	DR	15-43N	173-20W
2.	0545X	DR	15-19N	174-13W c/c 048°
3.	0800X	CELESTIAL	15-34N	173-56W
4.	1200X	CELESTIAL	15-56N	173-30W
5.	2000X	CELESTIAL	16-35N	172-40W
Hourly Positions:	2225X	DR	16-50N	172-24W c/c to 090°

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	15-34N	173-38W				
0300						
0400	15-26N	173-58W				
0500						
0600	15-20N	174-12W				
0700	15-27	174-04				
0800	15-34N	173-56W				
0900						
1000	15-46N	173-44W				
1100	15-51	173-37W				
1200	15-56N	173-30W				
1300						
1400	16-06N	173-18W				
1500	16-11N	173-11.5W				
1600	16-16N	173-05W				
1700						
1800	16-26N	172-53W				
1900						
2000	16-35N	172-40W				
2100						
2200	16-48N	172-28W				
2300						
2400	16-50N	172-12W				

Date 24 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No.

Organization Recorder

Sunrise: Time 0645 ^{Fixed by sun} Position: Lat. 16-52N, Long. 171-13W

Sunset: Time 1924 Position: Lat. 16-43N, Long. 169-50W

Miles travelled from 0000 hours to sunrise = 57

Miles travelled from sunrise to sunset = 81

Miles travelled from sunset to 2400 hours = 43

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	
1.	0000 X	DR	16-50N	172-12 W	
2.	0800 W	CELESTIAL	16-53N	171-11 W	
3.	1200 X	CELESTIAL	17-00.6	170-33 W	
4.	1400 X	DR	17-00 N	170-13W	e/c TO 140°T A/E STOP COURSE 070°T
	1700 X	DR	16-42N	169-55 W	
5.	1840 X	DR	16-41N	170-00W	
	2000 X	CELESTIAL	16-46N	169-50W	

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100		171-55W				
0200	16-51N	171-55W				
0300		171-50				
0400	16-51.5N	171-45W				
0500						
0600	16-52N	171-28 W				
0700	16-52.5N	171-20				
0800	16-53 N	171-11 W				
0900	16-55	171-09 W				
1000	16-57N	170-53 W				
1100	16-58.5N	170-43				
1200	17-00N	170-33 W				
1300	17-00	170-23				
1400	1700 N	170-13 W				
1500	16 54	170-06				
1600	16-47N	170-00W				
1700	16-42	69 55				
1800	42	69 57				
1900	41	170-00				
2000	16-46N	169-50W				
2100		43				
2200	16-52N	169-32 W				
2300						
2400	17-02N	169-15W				

ADVANCED
→ CLOCKS ONE
HOUR TO
CONFORM WITH
+ 10 (W) TIME ZONE

Date 28 FEB 1967 Ship GEORGE EASTMAN (YAG 39) Cruise No.

Organization Recorder

Sunrise: Time 0733 Position: Lat. 17-23N, Long. 168-08W

Sunset: Time 1910 Position: Lat. 17-57N, Long. 166-34W

Miles travelled from 0000 hours to sunrise = 69

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours = 46

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000N	DR	17-02N	169-15W
2.	0800N	LORAN	17-25N	168-03W
3.	1200N	CELESTIAL	17-36N	167-33W
4.	2000 W	LORAN	18-00N	166-25W
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	17-05N	168-57W				
0300						
0400	17-12N	168-39W				
0500						
0600	17-18N	168-21W				
0700						
0800	17-25N	168-03W				
0900						
1000	17-30N	167-48W				
1100	33	40				
1200	17-36N	167-33W				
1300	39	25				
1400	17-42N	167-16W				
1500	45	08				
1600	17-44N	166-55W				
1700						
1800	17-54N	166-43W				
1900	57	34				
2000	18-00N	166-25W				
2100						
2200	18-07N	166-07W				
2300						
2400	18-19N	165-30W				

38
E
15

Date 26 Feb 1967 Ship GEORGE EASTMAN (44639) Cruise No. _____

Organization PS Recorder _____

Sunrise: Time 0720 Position: Lat. 18-38N, Long. 164-40W

Sunset: Time 1855 Position: Lat. 19-32N, Long. 163-00W

Miles travelled from 0000 hours to sunrise = 70

Miles travelled from sunrise to sunset = 110

Miles travelled from sunset to 2400 hours = 39

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 W	DR	18-18N	165-48W
2.	0800 W	LORAN CELESTIAL	18-39N	164-34W
3.	1200 W	LORAN	19-02N	163-58.5W
4.	2000 W	LORAN	19-38N	162-50W C/S 8 KTS
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200	18-19N	165-30W				
0300						
0400	18-25N	165-12W				
0500						
0600	18-32N	164-54W				
0700						
0800	18-39N	164-34W				
0900	45	25				
1000	18-52N	164-16W				
1100	57	07				
1200	19-02N	163-58.5				
1300	07	49				
1400	19-11N	163-41				
1500	15	33				
1600	19-19N	163-25				
1700	24	17				
1800	19-28N	163-08				
1900	33	162-59				
2000	19-38N	162-50W				
2100						
2200	19-44N	162-37W				
2300						
2400	19-50N	162-24W				

Date 27 FEB 1967 Ship GEORGE EASTMAN (YAL 39) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0705 Position: Lat. 20-10N, Long. 161-36W

Sunset: Time 1845 Position: Lat. 20-11N, Long. 160-17W

Miles travelled from 0000 hours to sunrise = 50

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours = 28

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000W	DR	19-50N	162-24W
2.	0800W	LORAN	20-13N	161-29.5W
3.	1200W	LORAN	20-22.5N	161-08W
	1300W	DR	20-25N	161-00W e/c 090°T
4.	2000W	LORAN	20-18N	160-04.5W e/c 067°T
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
		162-24				
0100		15				
0200	19-57N	162-11W				
0300		04				
0400	20-00N	161-57W				
0500		50				
0600	20-05N	161-43W				
0700	20-09	34				
0800	20-13N	161-29.5W				
0900	15	24				
1000	20-17N	161-18W				
1100	20	13				
1200	20-22.5N	161-08W				
1300	25	00				
1400	20-24N	160-55W				
1500	24	47				
1600	20-23N	160-38W				
1700	22	30				
1800	20-20N	160-22W				
1900	19	13				
2000	20-18N	160-04.5W				
2100	19					
2200	20-20N	159-52W				
2300						
2400	20-23N	159-47W				

No

Date 28 Feb 1967 Ship () Cruise No.

Organization Recorder

Sunrise: Time 0658 Position: Lat. 20-37N, Long. 159-¹⁷27W

Sunset: Time 1700 Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise = 30

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours = —

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0000 W	DL LORAN	20-23N	159-47W
2.	0800 W	LORAN	20-40N	159-10W
3.	1200 W	LORAN		
4.				
5.				

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

0100						
0200	20-27N	159-39W				
0300						
0400	20-31N	159-31W				
0500						
0600	20-35N	159-23W				
0700	20-37	159-17				
0800	20-40N	159-10W				
0900	43	57-03				
1000	47	58-56				
1100	52	58-49				
1200	20 56	158-42				
1300	21-01	-35				
1400	5	28				
1500	10	21				
1600	15	14				
1700	20	07				
1800	21-25	58-03				
1900	21-30	58-00				
2000						
2100						
2200						
2300						
2400						

DEPARTMENT OF THE NAVY
SHIP WEATHER OBSERVATION SHEET

USS George Eastman YAG-39
AT/PASSAGE FROM NAVY

DATE (GMT) 15 Feb 68
TO Port Harbor Puerto Rico

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	095	14	10	ovc	30.05	70	73	10	1000	SC							
01	090	8.5	10	ovc	30.04	80	73	10	1000	SC							
02	080	10.4	10	ovc	30.04	79	73	10	2000	SC							
03	185	12.2	10	ovc	30.04	79	70	10	2000	SC							
04	085	14	10	ovc	30.03	76	69	10	1000	SC							
05	050	10	10	BKN	30.08	75	69	7	2000	CU							
06	055	7	10	BKN	30.10	74	68	8	2000	CU							
07	065	8	10	BKN	30.12	73	68	8	2000	CU							
08	075	5	10	BKN	30.12	73	68	8	2000	CU							
09	085	5	10	BKN	30.13	73	68	8	2000	CU							
10	095	5	10	BKN	30.13	73	68	8	2000	CU							
11	070	5	10	BKN	30.12	73	68	8	2000	CU							
12	075	5	10	BKN	30.12	73	68	8	2000	CU							
13	078	3.5	10	BKN	30.13	73	68	8	2000	CU							
14	050	7.8	10	BKN	30.13	73	68	8	2000	CU							
15	061	4.3	10	BKN	30.12	73	68	8	2000	CU							
16			16	BKN	30.12	74	69	8	2000	CU							
17			10	BKN	30.12	75	70	8	2000	CU							
18	183	24	10	BKN	30.14	76	71	8	2000	CU	80	090	3	3	085	3	6
19	185	24	10	BKN	30.16	75	71	8	2000	CU	80	085	3	3	080	3	6
20	086	24	10	BKN	30.16	76	71	9	2000	CU	80	085	3	3	085	3	6
21	090	20	10	BKN	30.12	79	74	9	2000	CU	80	090	3	3	100	3	6
22	090	20	10	BKN	30.08	79	74	7	2000	CU	80	090	3	3	100	3	6

DEPARTMENT OF THE NAVY
SHIP WEATHER OBSERVATION SHEET

USS GEORGE E. YAG 39

DATE (GMT)

16 FEB

19

67

AT/PASSAGE FROM

PHNSY

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
14 00	220	5	10	BKN	30.04	79	74	9	2000	SC	80	220	4	1	110	3	2
15 00	220	8	10	BKN	30.05	80	74	6	2000	CU	84	220	4	1	220	220	2
16 00	120	11	10	R	30.04	74	71	8	2000	CU	80	220	4	1	220	3	2
17 00	120	11	10	R	30.04	74	71	8	2000	CU	80	220	4	1	220	3	2
18 00	100	14	10	BKN	30.04	78	72	6	2000	CU	80	220	4	1	220	3	2
19 00	105	12	10	BKN	30.05	77	72	5	2000	CU	80	220	4	1	220	3	2
20 00	105	12	10	BKN	30.05	76	71	5	2000	CU	80	220	4	1	220	3	2
21 00	115	24	10	SCT	30.09	75	70	3	2000	CU	80	110	4	2	115	3	3
22 00	125	26	10	SCT	30.09	76	70	4	2000	CU	80	115	4	3	120	3	4
23 00	125	25	10	SCT	30.10	76	70	5	2000	CU	80	130	4	3	130	3	3
24 00	128	25	10	SCT	30.10	76	70	4	2000	CU	80	125	4	3	130	3	3
01 00	114	24	10	SCT	30.10	74	71	6	2000	CU	80	125	4	3	120	3	3
02 00	110	25	10	SCT	30.08	75	71	5	2000	CU	80	125	4	3	120	3	3
03 00	119	23	10	SCT	30.06	76	71	6	2000	CU	80	120	4	3	135	3	3
04 00	145	20	10	SCT	30.04	76	71	6	2000	CU	80	145	4	3	135	3	3
05 00	145	20	10	SCT	30.02	76	71	6	2000	CU	80	145	4	3	135	3	3
06 00	127	20	10	SCT	30.01	76	71	6	2000	CU	80	127	4	3	135	3	3
07 00	155	18	10	SCT	30.02	78	71	6	2000	CU	80	155	4	2	140	3	5
08 00	114	23	10	SCT	30.05	76	70	5	2000	CU	80	155	4	2	140	3	5
09 00	115	24	10	SCT	30.07	76	71	6	2000	CU	80	155	4	2	140	3	5
10 00	115	20	10	SCT	30.08	79	71	6	2000	CU	80	155	4	2	140	3	5
12 00	120	19	10	SCT	30.08	79	70	3	2000	CU	80	155	4	2	140	3	5
13 00	110	24	10	SCT	30.06	80	73	3	2000	CU	80	140	3	3	135	3	5
14 00	100	24	10	SCT	30.04	78	71	4	2000	CU	80	130	4	2	130	3	5

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN YAG-39

DATE (GMT)

17 FEBRUARY19 67

AT/PASSAGE FROM

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
14 00	110	27	10	SCT	30.01	78	70	2	2000	CU	80	120	3	3	120	3	5
15 01	095	23	10	SCT	29.99	80	72	2	2000	CU	80	115	3	3	115	3	4
16 02	113	17	10	SCT	29.99	80	73	3	2000	CU	80	110	3	3	120	3	5
17 03	091	21	10	SCT	29.99	79	72	4	2000	CU	80	115	3	3	125	3	5
18 04	091	21	10	SCT	30.00	78	71	3	2000	CU	80	110	3	3	120	3	5
19 05	108	19	10	SCT	30.01	77	71	3	2000	CU	80	105	3	3	115	3	5
20 06	109	19	10	SCT	30.03	77	71	3	2000	CU	80	105	3	3	115	3	4.5
21 07	109	19	10	SCT	30.05	77	71	3	2000	CU	80	105	3	3	115	3	4.5
22 08	121	17	10	SCT	30.04	78	72	4	2000	CU	80	121	3	2	115	3	4-5
23 09	121	17	10	SCT	30.04	78	72	4	2000	CU	80	121	3	2	115	3	4.5
24 10	096	16	10	SCT	30.01	77	71	2	2000	CU	81	121	3	2	121	3	4
01 11	096	24	10	SCT	30.00	77	71	2	2000	CU	81	121	3	2	121	3	4
02 12	095	19	10	SCT	30.00	77	71	2	2000	CU	81	121	3	2	121	3	4
03 13	093	14	10	SCT	29.92	76	70	3	2000	CU	81	121	3	2	121	3	4
04 14	090	20	10	SCT	29.92	77	71	3	2000	CU	80	120	3	2	120	3	4
05 15	095	22	10	SCT	29.96	76	71	4	2000	CU	80	120	3	2	120	3	4
06 16	100	20	10	SCT	29.98	75	71	4	2000	CU	80	130	3	2	130	3	4
07 17	100	22	10	SCT	30.00	76	70	4	2000	CU	80	110	3	1	110	3	3
08 18	087	23	10	SCT	30.00	77	71	5	2000	CU	81	115	3	1	105	3	3
09 19	103	24	10	SCT	30.03	78	71	5	2000	CU	81	100	3	1	105	3	3
10 20	092	22	10	SCT	30.04	78	72	5	2000	CU	81	110	3	1	115	3	3
11 21	098	20	10	SCT	30.04	78	72	6	2000	CU	81	110	3	1	110	3	3
12 22	098	20	18	SCT	30.04	78	72	6	2000	CU	81	110	3	1	110	3	3
13 23	085	19	10	SCT	30.00	78	72	6	2000	CU	81	085	2	1	100	3	3

TABLE II

SHIP WEATHER OBSERVATION SHEET

1955

DATE *15 February*

AT/PASSAGE FROM

TO

TABLE 1

TIME (GMT)	WINDS IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees Fahrenheit)		CLOUDS			SEA WATER TEMP (Surface and Depth)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Air Bulb	Sea Surf	Amount (Tenths)	Height	Form		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
15-01	075	17	10	scT	29.98	78	72	6	1000	CU	52	215	3	2	216	4	5.5
15-02	075	22	10	scT	29.98	78	72	6	1000	CU	51	215	3	2	216	4	5.5
15-03	077	16	10	scT	29.93	80	76	5	1000	CU	51	000	3	3	000	4	5.5
15-04	078	17	10	scT	29.93	82	74	2	1000	CU	51	015	3	3	015	4	5.5
15-05	075	23	10	scT	29.94	77	72	3	1000	CU	51	015	3	3	015	4	5.5
15-06	076	20	10	scT	29.96	75	74	4	1000	CU	51	020	3	3	020	4	5.5
15-07	076	22	10	scT	29.96	76	71	2	1000	CU	51	025	3	3	025	4	5.5
15-08	073	25	10	scT	29.99	76	72	3	1000	CU	51	025	3	3	025	4	5.5
15-09	076	21	10	scT	30.00	75	72	3	1000	CU	51	025	3	3	025	4	5.5
15-10	076	21	10	scT	30.00	76	71	2	1000	CU	51	025	3	3	025	4	5.5
15-11	077	20	10	scT	30.00	78	71	2	1000	CU	51	025	3	3	025	4	5.5
15-12	079	20	10	scT	29.99	78	71	3	1000	CU	51	028	3	3	028	4	5.5
15-13	077	22	10	scT	29.94	77	72	3	1000	CU	51	028	3	3	028	4	5.5
15-14	065	22	10	scT	29.93	77	72	4	1000	CU	51	019	3	3	019	4	5.5
15-15	055	25	10	scT	29.92	77	71	3	1000	CU	51	030	3	3	030	4	5.5
15-16	051	24	10	scT	29.92	77	72	4	1000	CU	54	035	3	3	035	4	5.5
15-17	055	23	10	scT	29.92	77	71	3	1000	CU	51	041	3	3	041	4	5.5
15-18	045	25	10	scT	29.96	77	72	4	1000	CU	52	045	3	3	045	4	5.5
15-19	045	26	10	scT	29.97	78	72	5	1000	CU	53	051	3	3	051	4	5.5
15-20	059	25	10	scT	29.97	78	73	7	1000	CU	53	067	3	2	068	4	5.5
15-21	060	25	10	scT	29.97	78	73	8	1000	CU	53	067	3	2	068	4	5.5
15-22	067	27	10	scT	29.97	79	74	4	1000	CU	53	060	3	3	060	4	5.5
15-23	060	27	10	scT	29.92	79	74	4	1000	CU	53	050	3	3	050	4	5.5

SHIP WEATHER OBSERVATION SHEET

SHIP NAME *SPRINT PATROL 1st 39*

DATE (GMT) *19 Feb 13*

AT VESSEL FROM *SPRINT OPS*

TO

TABLE I

TIME (GMT)	WINDS IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP (Degrees and tenths)	SEA WAVES			WIND WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	067	27	10	SCT	29.93	77	71	4	2000	CU	83	080	3	2	080	4	5
01	069	27	10	SCT	29.92	80	75	4	2000	CU	82	080	3	2	080	4	5
02	067	27	10	SCT	29.87	80	75	4	2000	CU	85	080	3	2	080	4	5
03	075	25	10	SCT	29.88	81	74	4	2000	CU	85	090	3	2	090	4	5
04	060	24	10	SCT	29.86	81	74	3	2000	CU	81	080	3	2	080	4	5
05	070	20	10	SCT	29.89	81	74	3	2000	CU	81	075	3	3	075	4	6
06	075	21	10	SCT	29.76	77	74	3	2000	CU	81	075	3	3	075	4	6
07	060	23	10	SCT	29.90	80	74	3	2000	CU	82	075	3	3	075	4	6
2 08	068	24	10	SCT	29.92	79	74	4	2000	CU	84	075	3	3	075	4	6
2 09	066	23	10	SCT	29.92	83	74	3	2000	CU	84	075	3	3	075	4	6
2 10	067	23	10	SCT	29.92	79	74	3	2000	CU	84	075	3	3	075	4	6
24 11	035	24	10	SCT	29.92	77	74	5	2000	CU	84	075	3	3	075	4	6
010 12	067	24	10	SCT	29.90	77	74	5	2000	CU	84	075	3	3	075	4	6
2 13	069	24	10	SCT	29.96	79	74	3	2000	CU	84	075	3	3	075	4	6
3 14	085	23	10	SCT	29.86	77	72	3	2000	CU	84	075	3	3	075	4	6
4 15	075	20	10	SCT	29.87	77	73	3	2000	CU	84	075	3	3	075	4	6
5 16	070	25	10	SCT	29.81	77	73	3	2000	CU	83	075	3	3	075	4	6
600 17	070	29	10	SCT	29.89	77	74	5	2000	CU	83	080	3	3	080	4	5
7 18	070	25	10	SCT	29.91	78	74	5	2000	CU	83	070	3	3	070	4	5
8 19	074	23	10	SCT	29.90	78	74	5	2000	CU	84	070	3	3	070	4	5
9 20	072	27	10	SCT	29.94	79	74	5	2000	CU	84	070	3	3	070	4	5
10 21	073	26	10	SCT	29.95	79	74	6	2000	CU	84	070	3	3	070	4	5
11 22	070	26	10	SCT	29.95	79	74	5	2000	CU	84	070	3	3	070	4	5
1200 23	070	26	10	SCT	29.95	79	74	5	2000	CU	84	070	3	3	070	4	5

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN (39) DATE (GMT) NOV 20 19 67

AT/PASSAGE FROM SPECIAL OP. TO

TABLE 1

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
13 00	075	26	10	SCT	29.92	80	75	6	2000	CU	84	075	3	4	065	3	5-6
14 01	075	27	10	SCT	29.90	80	75	6	2000	CU	84	075	3	4	065	3	5-6
15 02	075	27	10	SCT	29.87	80	75	6	2000	CU	84	075	3	4	065	3	5-5
16 03	070	15	10	SCT	29.87	80	75	5	2000	CU	84	080	3	3	075	4	6
17 04	075	21	10	SCT	29.87	80	74	6	2000	CU	84	075	3	4	070	4	6
18 05	081	23	10	SCT	29.88	79	74	7	2000	CU	84	075	3	4	070	4	6
19 06	080	25	10	SCT	29.89	78	74	6	2000	CU	84	065	3	4	070	4	6
20 07	080	25	10	SCT	29.93	78	71	6	2000	CU	84	065	3	4	070	4	5-6
21 08	080	26	10	SCT	29.95	77	73	6	2000	CU	84	080	3	4	070	4	5-6
22 09	080	26	10	SCT	29.93	77	73	6	2000	CU	84	080	3	4	070	4	6-7
23 10	080	26	10	SCT	29.95	77	73	6	2000	CU	84	080	3	4	070	4	6-7
24 11	090	30	8	OVC	29.94	77	73	9	2000	CU	84	100	3	4	095	4	7
25 12	090	27	8	BKN	29.92	77	73	9	2000	CU	83	090	3	4	090	4	7
26 13	080	25	8	BKN	29.90	78	73	8	2000	CU	84	080	3	4	080	4	7
27 14	090	31	10	SCT	29.91	77	72	5	2000	CU	84	080	3	4	080	4	7
28 15	082	33	10	SCT	29.89	77	71	4	2000	CU	82	075	3	4	075	4	7
29 16	092	29	10	SCT	29.90	77	71	6	2000	CU	82	080	3	4	080	4	7
30 17	084	26	10	SCT	29.91	78	72	6	2000	CU	82	080	3	4	080	4	7
31 18	084	27	10	SCT	29.93	78	72	8	2000	CU	82	085	3	4	085	4	7
32 19	100	27	10	SCT	29.96	78	72	8	2000	CU	82	100	3	4	080	4	7
33 20	100	28	10	SCT	29.98	78	72	8	2000	CU	82	100	3	4	080	4	7
34 21	100	28	18	SCT	29.99	78	72	8	2000	CU	82	100	3	4	080	4	7
35 22	100	27	18	SCT	29.99	78	72	8	2000	CU	82	100	3	4	080	4	7
36 23	095	28	10	SCT	29.98	80	73	5	2000	CU	83	065	3	5	070	4	7

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN (YAG-39)

DATE (GMT) TUESDAY 21 19 67

AT/PASSAGE FROM SPECIAL OP

TO

TABLE I

TIME (GMT)	WINDS IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	105	30	10	scT	29.98	79	71	5	2000	CU	83	075	3	4	080	3	5-6
01	90	32	10	scT	29.92	79	71	4	2000	CU	81	075	3	4	075	3	5-6
02	100	28	10	scT	29.93	78	70	3	2000	CU	81	070	3	4	080	3	10
03	103	29	10	scT	29.93	80	71	4	2000	CU	81	070	2	4	085	3	10
04	101	29	10	scT	29.94	78	71	5	2000	CU	81	075	3	4	085	3	10
05	108	30	10	scT	29.74	80	71	5	2000	CU	81	085	3	4	090	3	10
06	080	26	10	scT	29.96	78	70	4	2000	CU	82	090	2	4	085	3	5
07	080	28	10	scT	29.97	79	70	4	2000	CU	82	090	2	4	085	3	5
08	080	25	10	scT	30.00	78	70	4	2000	CU	82	090	2	4	085	3	5
09	080	28	10	scT	30.00	78	70	4	2000	CU	82	090	2	4	085	3	5
10	080	25	10	scT	30.00	78	70	4	2000	CU	82	090	2	4	085	3	5
11	080	29	10	scT	29.98	79	70	2	2000	CU	82	085	3	3	080	3	5
12	090	25	10	scT	29.98	76	70	2	2000	CU	82	080	3	3	080	3	5
13	090	25	10	scT	29.94	82	69	2	2000	CU	81	075	3	3	070	3	5
14	095	25	10	scT	29.92	77	70	2	2000	CU	81	080	3	3	075	3	5
15	081	29	10	scT	29.92	77	70	3	2000	CU	82	075	3	3	075	3	5
16	081	27	10	scT	29.91	76	69	4	2000	CU	82	080	3	3	080	3	5
17	066	29	10	scT	29.91	76	69	2	2000	CU	82	070	3	3	070	3	5
18	068	33	10	scT	29.92	76	69	3	2000	CU	82	070	3	3	080	3	5
19	090	25	10	scT	29.98	76	69	3	2000	CU	82	090	3	3	087	3	5-6
20	090	25	10	scT	29.95	76	70	3	2000	CU	82	090	3	3	087	3	5-6
21	090	26	10	scT	29.99	76	70	3	2000	CU	82	090	3	3	087	3	5-6
22	090	28	10	scT	29.91	79	74	3	2000	CU	82	090	3	3	087	3	5-6
23	095	25	10	scT	29.94	81	71	1	2000	CU	84	105	3	3	100	3	5-6

TABLE II
SYNOPTIC OBSERVATIONS

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN (YAG-39)

DATE (GMT) WEDNESDAY 22 19 67

AT/PASSAGE FROM SPECIAL OP

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	095	25	10	SCT	29.91	81	71	1	2000	CU	83	115	3	3	110	3	5-6
01	095	25	10	SCT	29.89	79	73	1	2000	CU	84	110	3	3	105	3	5-6
02	085	25	10	SCT	29.88	81	73	1	2000	CU	84	110	3	3	105	3	5-6
03	083	28	10	SCT	29.88	84	75	1	2000	CU	83	100	3	3	105	3	7
04	087	26	10	SCT	29.87	82	73	2	2000	CU	82	100	3	3	105	3	6
05	075	19	10	SCT	29.88	81	73	3	2000	CU	81	115	3	3	110	3	7
06	090	19	10	SCT	29.86	79	73	3	2000	CU	81	070	3	3	075	3	7
07	101	26	10	SCT	29.88	79	74	2	2000	CU	82	075	3	3	075	3	6
08	102	25	10	SCT	29.88	80	73	2	2000	CU	82	070	3	3	070	3	6
09	102	26	10	SCT	29.89	78	72	4	2000	CU	82	075	3	3	075	3	7
10	095	26	10	SCT	29.93	78	72	3	2000	CU	82	060	3	3	060	3	7
11	080	27	10	SCT	29.90	78	72	3	2000	CU	82	080	3	3	080	3	6
12	080	26	10	SCT	29.90	78	72	3	2000	CU	82	080	3	3	080	3	6
13	080	26	10	SCT	29.90	78	72	3	2000	CU	82	080	3	3	065	4	5-6
14	080	26	10	SCT	29.85	77	70	2	2000	CU	82	080	3	3	080	4	5-6
15	085	23	10	SCT	29.88	78	71	2	2000	CU	82	085	3	3	075	3	6
16	098	25	10	SCT	29.88	77	71	6	2000	CU	82	085	3	3	075	3	6
17	100	24	10	SCT	29.88	77	71	4	2000	CU	83	085	3	3	075	3	6
18	095	27	10	SCT	29.89	77	70	3	2000	CU	83	080	3	3	075	3	5-6
19	105	25	10	SCT	29.92	78	72	3	2000	CU	83	080	3	3	075	4	7
20	100	25	10	SCT	29.95	78	73	4	2000	CU	81	070	3	3	070	4	6
21	105	24	10	SCT	29.97	79	73	4	2000	CU	81	065	3	3	070	4	6
22	100	26	10	SCT	29.98	80	73	3	2000	CU	81	070	3	3	075	4	6
23	112	29	10	SCT	29.94	79	71	2	2000	CU	82	085	3	3	090	4	6

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS George Eastman (YAG-39)

DATE (GMT) Thursday 23 19 67

AT/PASSAGE FROM Special ops

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
13 00	100	29	10	SC	29.93	79	72	4	2000	CU	82	085	3	3	080	3	6
14 01	077	28	10	SC	29.90	80	73	3	2000	CU	82	090	3	3	085	3	6
15 02	085	28	10	SC	29.90	79	72	5	2000	CU	82	080	3	3	075	3	6
16 03	077	28	10	SC	29.90	79	72	5	2000	CU	82	079	3	4	075	3	6
17 04	083	24	10	SC	29.94	81	73	6	2000	CU	83	100	3	3	105	3	5
18 05	090	26	10	SC	29.90	80	73	6	2000	CU	82	100	3	3	105	3	5
19 06	095	33	10	SC	29.91	80	73	6	2000	CU	82	105	3	3	110	3	4
20 07	085	24	10	SC	29.92	78	71	5	2000	CU	82	095	3	2	100	3	4
21 08	085	21	10	SC	29.93	77	70	3	2000	CU	83	090	3	2	095	3	4
22 09	090	24	10	SC	29.94	77	70	2	2000	CU	83	085	3	2	090	3	4
23 10	085	28	10	SC	29.95	77	71	2	2000	CU	82	090	3	2	095	3	4
24 11	077	37	10	SC	29.93	78	71	1	2000	CU	81	085	3	2	090	3	4
01 12	090	27	10	SC	29.93	77	72	1	2000	CU	81	085	3	2	090	3	4
02 13	090	27	10	SC	29.92	77	71	2	2000	CU	81	095	3	2	090	3	4
03 14	083	27	10	SC	29.91	77	72	4	2000	CU	81	080	3	2	075	3	4
04 15	095	20	10	SC	29.90	77	72	4	2000	CU	84	095	3	2	100	3	4
05 16	075	25	10	SC	29.90	77	72	4	2000	CU	84	075	3	2	100	3	4
06 17	095	25	10	SC	29.90	76	72	6	2000	CU	82	095	3	3	105	3	4-5
07 18	095	25	10	SC	29.90	76	72	6	2000	CU	82	095	3	3	105	3	4-5
08 19	113	25	10	SC	29.93	79	73	5	2000	CU	81	125	3	2	120	3	5
09 20	113	27	10	SC	29.95	79	73	7	2000	CU	81	110	3	2	115	3	5
10 21	103	23	10	SC	29.96	81	72	4	2000	CU	82	100	3	2	105	3	6
11 22	104	23	10	SC	29.96	80	72	9	2000	CU	82	105	3	2	110	3	6
12 23	095	20	10	SC	29.94	81	72	3	2000	CU	82	085	3	3	090	3	6

DEPARTMENT OF THE NAVY
SHIP WEATHER OBSERVATION SHEET

USS George Eastman YAG-39

DATE (GMT) 24 FEB (FRIDAY) 19 67

AT/PASSAGE FROM _____

TO _____

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
13 00	105	28	10	SCT	29.92	80	73	3	2000	CU	82	090	3	3	090	4	6
01	105	23	10	SCT	29.90	80	73	2	4000	CU	82	085	3	3	085	4	6
02	105	23	10	SCT	29.88	79	71	1	2000	CU	82	085	3	3	085	4	6
03	102	26	10	SCT	29.87	79	71	1	2000	CU	82	080	3	3	085	4	6
04	099	27	10	SCT	29.89	79	71	1	2000	CU	82	095	3	3	090	4	6
05	103	23	10	SCT	29.89	79	71	5	2000	CU	84	095	3	3	090	4	6
06	103	20	10	SCT	29.90	78	72	5	2000	CU	84	095	3	3	090	4	6
07	103	20	10	SCT	29.90	78	72	5	2000	CU	84	095	3	3	090	4	6
08	100	25	10	SCT	29.93	78	72	5	2000	CU	82	100	3	3	090	4	5
09	070	23	10	SCT	29.96	76	71	5	2000	CU	82	070	3	2	090	4	4
24 10	087	17	10	SCT	29.96	76	71	5	2000	CU	82	087	3	2	090	4	4
11	073	20	10	SCT	29.94	77	72	8	2000	CU	82	110	3	2	115	4	5
12	073	20	10	SCT	29.94	77	72	5	2000	CU	82	110	3	2	115	4	5
13	073	20	10	SCT	29.94	77	72	5	2000	CU	82	110	3	2	115	4	5
14	055	22	10	BRN	29.92	77	70	8	2000	CU	82	090	3	2	090	4	4
15	050	20	10	SCT	29.92	77	70	4	2000	CU	82	095	3	3	095	4	5
16	055	15	10	SCT	29.93	76	71	4	2000	CU	82	085	3	3	085	4	5
17	105	16	10	SCT	29.92	76	71	4	2000	CU	81	100	3	3	100	4	5
18	112	21	10	SCT	29.93	76	70	4	2000	CU	81	100	3	3	110	4	5
19	058	17	10	SCT	29.96	79	72	3	2000	CU	81	095	3	3	110	4	5
20	060	20	10	SCT	29.97	77	70	5	2000	CU	80	095	3	3	110	4	5
21	056	13	10	SCT	29.98	78	72	7	2000	CU	81	100	3	3	110	4	5
12 22	110	20	10	SCT	29.98	78	72	7	2000	CU	81	100	3	3	120	4	5
13 23	100	20	10	SCT	29.18	78	72	7	2000	CU	81	100	3	3	120	4	5

TABLE II

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN (YAG 39)

DATE (GMT) 25 SAT.

19 67

AT/PASSAGE FROM SPECIAL OPS

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
14 00	085	20	10	SCT	29.95	78	75	5	2000	CU	82	085	3	2	075	3	5
5 01	080	20	10	SCT	29.91	78	75	5	2000	CU	82	080	3	2	095	3	5
6 02	067	21	10	SCT	29.91	79	72	5	2000	CU	82	080	3	2	090	3	5
7 03	030	25	10	SCT	29.91	77	72	5	2000	CU	82	045	3	2	050	3	5
8 04	036	24	10	SCT	29.91	78	72	4	2000	CU	82	040	3	2	045	3	5
9 05	070	21	10	SCT	29.90	78	72	5	2000	CU	82	045	3	2	050	3	5
20 06	070	20	10	SCT	29.90	78	71	5	2000	CU	82	045	3	2	050	3	5
21 07	100	21	10	SCT	29.93	77	71	4	2000	CU	82	085	3	2	080	3	4
2 08	085	20	10	SCT	29.95	76	71	4	2000	CU	81	085	3	2	080	3	4
3 09	085	18	10	SCT	29.98	78	71	4	2000	CU	82	085	3	1	085	3	4
24 10	070	19	10	SCT	29.99	78	71	6	2000	CU	82	080	3	4	080	3	4
1 11	070	16	10	SCT	29.98	77	71	4	2000	CU	82	075	3	1	075	3	4
2 12	041	17	10	SCT	29.97	77	72	7	2000	CU	82	065	3	1	075	3	4
3 13	119	21	10	SCT	29.94	76	72	7	2000	CU	82	075	3	1	075	3	4
4 14	065	21	10	SCT	29.92	76	72	7	2000	CU	82	075	3	1	075	3	4
5 15	069	21	10	SCT	29.92	76	72	7	2000	CU	82	069	3	2	075	3	4
6 16	070	21	10	SCT	29.92	76	72	7	2000	CU	82	069	3	2	075	3	4
7 17	070	21	10	SCT	29.94	76	72	7	2000	CU	82	070	3	2	075	3	4
8 18	070	21	10	SCT	29.96	77	71	4	2000	CU	82	070	3	3	075	3	6
9 19	070	20	10	SCT	29.99	78	71	4	2000	CU	82	070	3	3	075	3	6
10 20	099	21	10	SCT	30.00	78	71	4	2000	CU	82	070	3	3	075	3	6
11 21	100	21	10	SCT	30.01	79	72	4	2000	CU	82	045	3	3	050	3	6
12 22	110	18	10	SCT	30.00	80	72	4	2000	CU	82	060	3	3	060	4	6
13 23	070	19	10	SCT	29.99	80	72	4	2000	CU	82	070	3	3	070	4	5

TABLE II

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS George EastmanDATE (GMT) 26 Feb.19 67AT/PASSAGE FROM Special Ops

TO

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	095	21	10	SCT	29.98	79	71	4	2000	CU	82	060	3	2	055	4	6
01	080	16	10	BKN	29.96	79	69	7	2000	CU	82	060	3	2	060	4	6
02	061	14	10	BKN	29.94	80	71	8	2000	CU	82	075	3	2	080	4	6
03	020	21	10	BKN	29.94	79	70	6	2000	CU	82	075	3	2	080	4	6
04	095	21	10	BKN	29.95	79	70	6	2000	CU	82	095	3	2	099	4	5
05	075	15	10	BKN	29.96	79	70	6	2000	CU	82	075	3	2	075	4	5
06	020	23	10	BKN	29.96	75	70	9	2000	CU	82	095	3	2	090	4	5
07	009	24	10	BKN	29.99	74	69	10	2000	CU	82	095	3	2	090	4	5
08	022	23	10	BKN	30.00	75	70	9	2000	CU	82	095	3	2	090	4	5
09	065	20	10	BKN	30.00	75	70	6	2000	CU	82	095	3	2	090	4	5
10	070	16	10	SCT	29.99	76	70	3	2000	CU	82	065	3	1	065	4	3
11	070	16	10	SCT	29.99	75	69	3	2000	CU	82	075	3	1	075	4	3
12	050	19	10	SCT	29.99	75	68	2	3500	CU	82	060	3	1	060	4	3
13	070	18	10	SCT	29.98	75	69	2	3500	CU	82	065	3	1	065	4	3
14	053	16	10	SCT	29.96	74	68	3	3500	CU	82	060	3	1	065	4	3
15	035	12	10	SCT	29.96	75	67	7	3500	CU	82	065	3	1	080	4	3
16	033	18	10	SCT	29.96	76	68	7	3300	CU	81	065	3	1	075	4	3
17	048	21	10	SCT	29.97	75	68	6	2000	CU	81	055	3	2	065	4	4
18	065	13	10	SCT	29.99	75	68	6	2000	CU	81	065	3	2	065	4	5
19	055	14	10	SCT	30.01	75	69	6	2000	CU	81	065	3	2	065	4	5
20	056	15	10	SCT	30.02	78	69	7	2000	CU	81	065	3	2	065	4	5
21	060	17	10	SCT	30.03	78	69	7	2000	CU	81	060	3	2	050	4	5
22	053	15	10	SCT	30.04	79	70	7	2000	CU	80	035	3	2	035	4	5
23	032	20	10	SCT	30.02	77	69	4	2000	CU		045	3	2	040	4	4

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN YAG-39

DATE (GMT) 27 FEB

19 67

AT/PASSAGE FROM SPECIAL OPS

TO PEARL HARBOR

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
1 00	062	14	10	SCT	29.99	76	69	5	2000	CU	80	045	3	2	040	3	4
5 01	062	11	10	SCT	29.97	76	69	7	2000	CU	80	045	3	2	040	3	4
6 02	040	10	10	SCT	29.97	76	69	7	2000	CU	80	075	3	1	070	3	3
7 03	025	12	10	SCT	29.98	75	71	6	2000	CU	80	050	3	1	055	3	3
8 04	015	14	10	SCT	29.98	75	70	6	2000	CU	80	055	3	1	060	3	3
9 05	020	22	10	SCT	29.99	75	69	6	2000	CU	80	045	3	1	050	3	4
10 06	009	19	10	SCT	29.99	75	69	8	2000	CU	80	040	3	1	040	3	4
11 07	050	19	10	SCT	30.00	74	68	8	2000	CU	80	055	3	1	055	3	4
12 08	065	16	10	SCT	30.01	73	67	9	2000	CU	80	050	3	1	050	3	4
13 09	045	14	10	SCT	30.01	73	67	7	2000	CU	80	050	3	1	060	3	3
14 10	045	14	10	SCT	30.01	72	66	7	2000	CU	80	060	3	1	060	3	3
15 11	020	14	10	R	30.01	70	67	7	2000	CU	80	070	3	1	070	3	3
16 12	025	17	10	SCT	30.02	70	67	7	2000	CU	80	075	3	2	080	3	3
17 13	050	16	10	SCT	30.00	70	67	7	2000	CU	80	050	3	2	080	3	3
18 14	030	21	10	SCT	29.99	73	67	8	2000	CU	81	050	3	2	055	3	5
19 15	080	20	10	R	29.98	73	69	10	2000	CU	81	050	3	2	055	3	5
20 16	098	20	10	R	29.98	72	69	10	2000	CU	81	050	3	2	055	3	5
21 17	070	20	10	R	29.99	73	68	7	2000	CU	81	050	3	2	045	3	5
22 18	043	20	7	R	30.02	76	69	10	2000	CU	81	050	3	3	045	4	6
23 19	030	21	8	OVC	30.03	72	69	10	2000	CU	80	050	3	3	050	4	6
24 20	045	26	9	OVC	30.05	75	70	9	2000	CU	80	050	3	3	045	4	7
25 21	070	30	9	OVC	30.06	75	70	9	2000	CU	80	055	3	3	050	4	8
26 22	051	27	9	OVC	30.05	73	67	9	2000	CU	80	060	3	3	055	4	8
27 23	050	24	9	OVC	30.05	73	68	9	2000	CU	80	055	3	3	050	4	7

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS GEORGE EASTMAN XAG-29

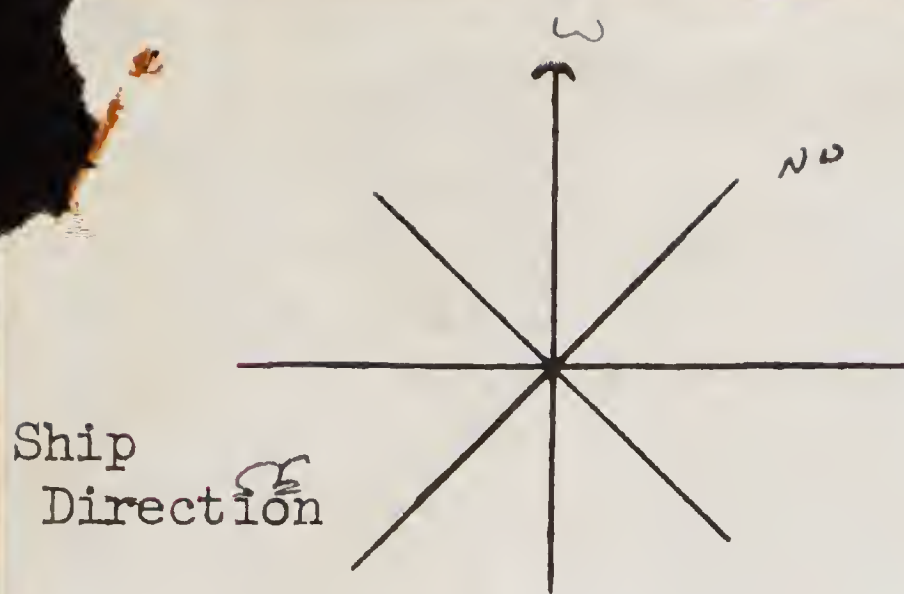
DATE (GMT) 28 FEBRUARY 19 67

AT/PASSAGE FROM SPECIAL OPS

TO PEARL HARBOR

TABLE I

TIME (GMT)	WINDS <input type="checkbox"/> IF ESTIMATED		VISI- BIL- ITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	006	29	10	SCT	30.03	74	68	8	2000	CU	82	060	3	3	050	4	7
01	008	34	10	SCT	30.01	74	67	9	2000	CU	82	065	3	3	055	4	9
02	060	34	10	SCT	30.00	74	67	7	2000	CU	82	060	3	3	055	4	8-9
03	060	34	10	SCT	30.02	74	67	7	2000	CU	82	060	3	3	055	4	8-9
04	037	31	10	SCT	30.02	72	67	9	2000	CU	80	037	3	4	055	4	8-9
05	037	31	10	SCT	30.02	72	67	9	2000	CU	80	037	3	4	050	4	8-9
06	041	33	10	BKN	30.04	74	66	9	2000	CU	80	045	3	4	050	4	8
07	045	27	10	BKN	30.04	72	66	9	2000	CU	80	045	3	4	050	4	8
08	040	27	10	SCT	30.07	72	66	6	2000	CU	80	045	3	5	050	4	9
09	038	20	10	SCT	30.08	73	68	7	2000	CU	80	045	3	4	050	4	8
10	035	21	10	BKN	30.07	73	67	6	2000	CU	80	045	3	4	040	4	8
11	045	23	10	BKN	30.07	74	68	5	2000	CU	80	045	3	4	040	4	8
12	045	21	10	BKN	30.05	73	68	5	2000	CU	80	050	3	4	045	4	8
13	052	20	10	OVC	30.04	74	67	9	2000	CU	80	050	3	4	045	4	9
14	067	20	10	OVC	30.03	73	67	10	2000	CU	80	050	3	4	050	4	9
15	063	20	10	OVC	30.03	72	65	10	2000	CU	80	055	3	4	055	4	9
16	062	24	10	BKN	30.03	73	66	7	2000	CU	80	050	3	4	050	4	9
17	062	25	10	BKN	30.05	72	65	6	2000	CU	80	075	3	4	075	4	9
18	037	21	10	BKN	30.08	72	65	7	2000	CU	80	037	3	4	075	4	8-
19	059	22	10	BKN	30.10	73	65	7	2000	CU	82	059	3	4	080	4	8-9
20	065	24	10	BKN	30.11	74	65	7	2000	CU	80	065	3	5	080	4	8-9
21	060	24	10	BKN	30.12	74	65	6	2000	CU	82	060	3	5	060	4	8-9
22	070	30	10	BKN	30.10	75	65	9	2000	CU	80	055	3	5	060	4	10
23	065	32	10	BKN	30.06	75	67	10	2000	CU	80	060	3	5	065	4	10



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

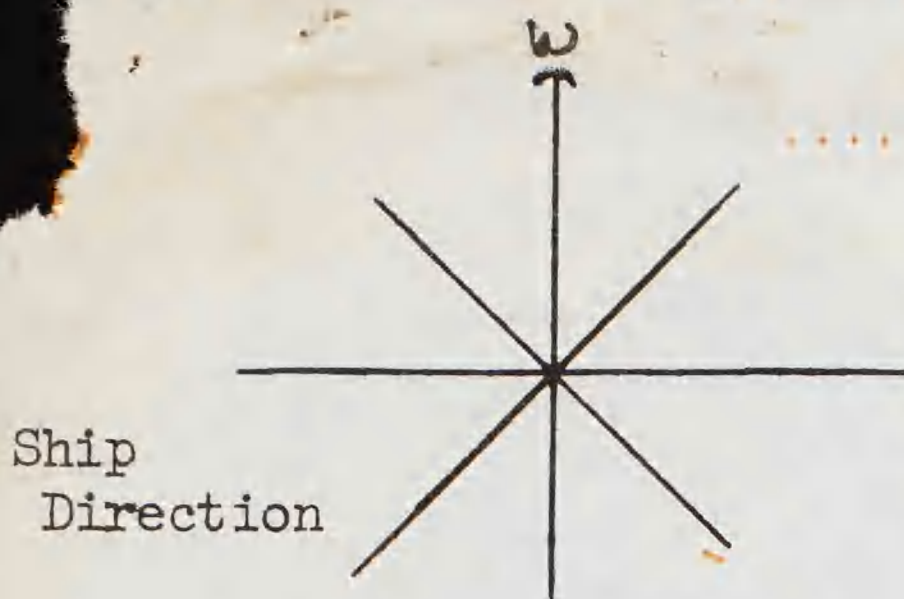
DeLong, F. Loh
Schreiber

Date 15 Feb 1967
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

0800					Clear of Pearl Harbor
0815	BFA/but.		2		Following ship - Have never seen this in so close may have something to do with the wind.
0825	RF Booby		1		Ad. following
0840	Pom. Jaeger		2	W	
0855	Pom. Jaeger		1	888	Ad. - light phase - following
0905	Pom. Jaeger	1	1		
0910	Pom. Jaeger	3	1		
0916	Pom. Jaeger	2	1		2 adults light phase, 1 immature
0938	BFA	1	1		2 adults light phase
0941	Pom. Jaeger	3	1		adult following ship
0956	BFA	1	1		2 adults feeding on H ₂ O, 1 immature
1007	Pomarine Jaeger	1 2	1		immature following LT - Total of 4
1010	M-B Tern	1	1		1 adult, 1 imm.
1020	RF Booby	1	1		Ad.
FF 1130	Sterna sp.	100 ± 20	1	888	Ad.
	R-F Booby	1			Feeding, traveling & feeding again. Long way out.
1345	Tropicbird sp.	1	1	NW	on horizon
1350	WRSP	1	1	W	
TF 1356	Sooty Terns	6	1	N	traveling flock well dispersed and flying fast - all adults and unstreamed
1405					Rain squall commenced
1415					Rain squall ended
FF 1422	Sooty Tern	80 ± 10	1	S	} flock alternately traveling and feeding
	Fairy Tern	4	1	S	
TF 1438	Sterna sp.	7	1	N	traveling flock well dispersed - flying fast on horizon
1503	G-B Tern	2	1	N	adults

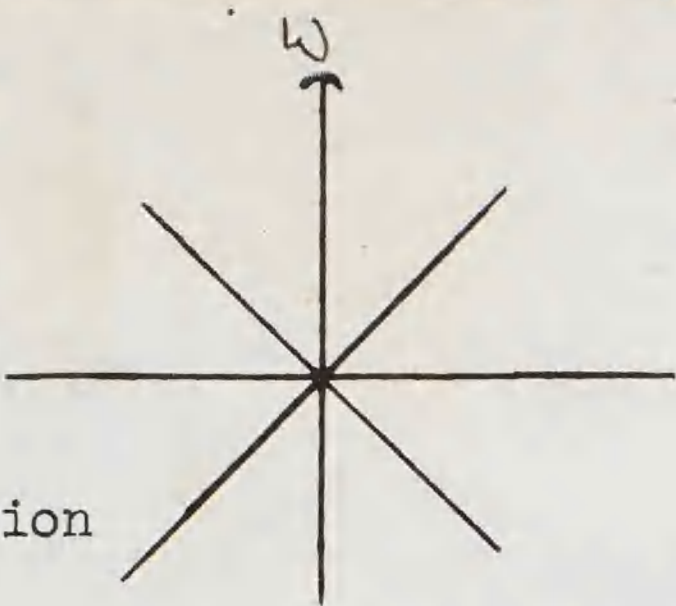


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 15 February 1967
Pg. # 2

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1509	G-B. Tern	1	NW		adult
FF	1515	Sterna sp.	11	☉		feeding flock on horizon - moved off to South as ship approached
	1521	G.B. Tern	1	N		adult
	1527	G.B. Tern	2	NW		adult
FF	1535	Sterna sp	5			
		Sooty tern	9			
		Fairy tern	2			
		G-B Tern	1			
	1542	W-RSR	1	SE		
FF	1545	Sterna sp	35 ± 5			
	1550	Sterna sp	2	SE		
	1610	RTTB	1	SE		
	1625	Pom Jaeger	1	E		
TF	1635	Sooty tern	9	W		
	1640	WRS P	1	SE		
TF	1658	Sooty Tern	11	NNW		traveling flock → adults
	1705	G-B Tern	1	NW		
	1715	Brown Booby	1	SE		ad.
	1720	Shear-Pet	1	SE		Dark bird, E/SS & belly - no more seen
	1748	Sooty Tern	1	NNW		adult
	1835					Sunset



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

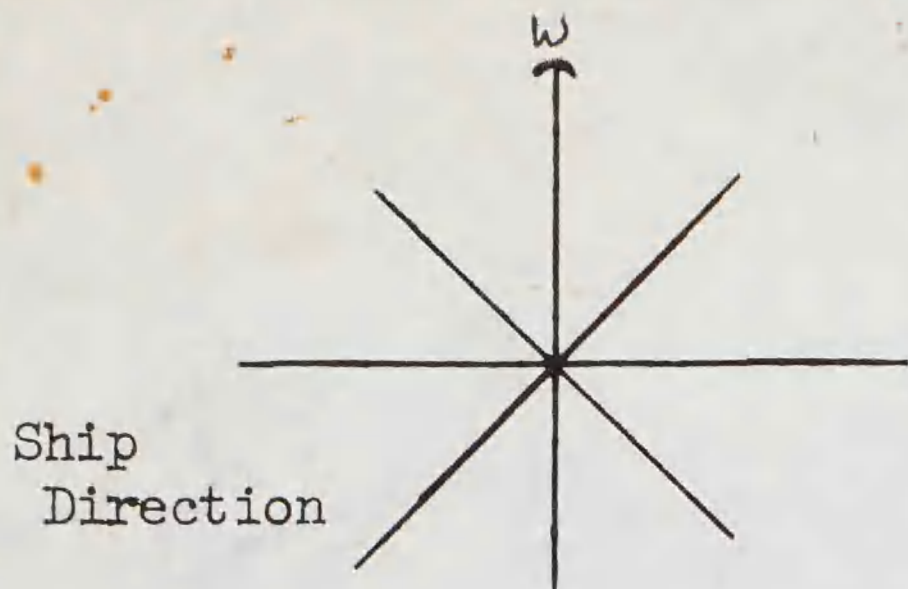
Sunrise - 0900 Delong
0900 - 1100 Fitch
1100 - 1300 Delong

Date 16 Feb 1967
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

	0714					Sun rise - begin obs.
	0735	WTTB	1	NE		
	0800	Shear-pet	1 2	NW		
	0804	Sooty tern	3	888		Searching & feeding
FF	0909	Sooty Terns	100 ± 10	⊙		a swirling feeding flock - moved off to NNW after being disturbed by ship.
		Fairy Tern	3	⊙		
		RFB	3	⊙		
		Shear/Pet.	2	⊙		
	0925	RFB	1	E		
FF	1019	Sooty Tern	7	⊙		swirling feeding flock on horizon - moved slowly off to SW
		Frigate sp.	1	⊙		
		RFB	2	⊙		
	1051	Tropicbird sp.	1	S		on horizon - probably WTTB
	1110	G. Frigate.	1	⊙		
	1112	RFB	3	⊙		adults
	1200	Sooty tern	3	N		
	1315	BFA	1	888		immature
	1410	Shear/pet.	1	NW		flying fast on horizon
	1438	G. Frigate	1	S		
	1441	RFB	1	E		adult
	1532	WTTB	1	⊙		pet circling ship
F	1630	Sooty tern	8	⊙		Searching.
	1750	Phoenix/	1	888		Dark cap, neck, back & mantle, white belly & underwings with narrow black border. Dark crissal.
		Tahitiian Petrel	1	888		
	1802	Phoenix/tah.	1	888		
		Pet				
	1818	WTTB	1	⊙		following ship
	1853					Sunset



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

0724 - 0930 Fitch
0930 - 1130 Delong
1130 - ~~1230~~ 1330 Fitch
1330 - 1530 Delong
1530 - 1730 Fitch
1730 - Sunset Delong

Date 17 Feb. 1967
Pg. # 1

SPECIMEN
or

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0724					Sunrise
0834	WTTB	1	⊙		Following ship
0839	Phoenix/Tahitian Petrel	1	SE		upper surface dark brown to black, dark breast band on whitish breast, underwings black to dark brown
FF 1020	Sooty tern	50 ± 10	ccc		Feeding then swirling high into the Air.
F 1038	sooty tern	10	888		Searching
1252	RFB	1	E		Immature
1615	Phoenix/Tahitian Petrel	1	SW		
1657	RFB	1	⊙		adult
FF 1740	Sooty tern	36	888		Feeding & swirling high & feeding again
1810	RFB	2	888		1 Ad; 1 imm
1847	"	1	888		1 imm.
1910					SS close obs

18 Feb

0800 - 1000

Raised
PM
19 Feb

{ 1 Imm RFB
(1 Pterodroma
above yesterday

0808 - HF - 1 -

0825 - RFB - 1 - NW

0846 - Pterodroma sp - 1 -

0910 WRSR - 1 - NW

0857 RFB - 1 - NW - 2

0913 HF - 1 - Feeding imm

0925 RFB - 1 - NW

0930 " - 2 - NE - 1 Ad: 1 im

0940 " - 1 - NE - SAD

0951 Bird sp - 1 - 288

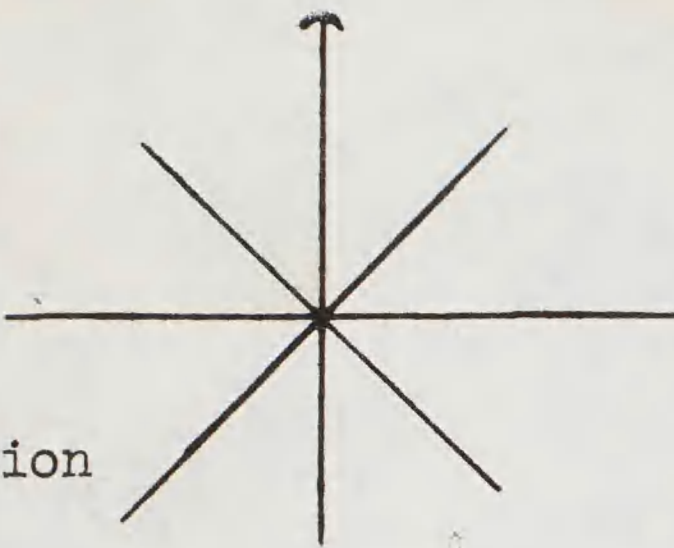
0958 " - 1 - "

1600 - 1700

1614 - RTTB - on light

1618 - HF - 1 - NW

1646 - RFB - 1 NE imm



Ship
Direction

Journal
Northern
Northern grid - ~~Drum~~
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 18 February 1967
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

Total 3 Y.F.
9 RFB
2 WRSP
2 Bird sp.
1 Phoe/tal Pet
1 RTTB

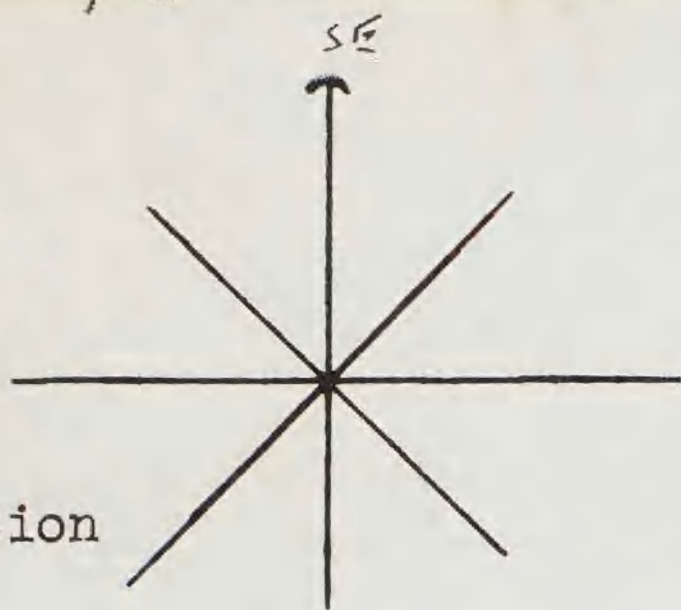
LT totals
for 0800-1000
1400-1800

Passer 12 hr
18

~~0800-1000~~ 0800-1000
LT
2 Yr. Fnd
5 RFB
1 WRSP
2 Bird Sp
1 AG
2 Yr. Fnd
1 RFB
1 Pterodroma
1 WRSP
1 Bird sp

Summary of LT Watch

Ship
Direction



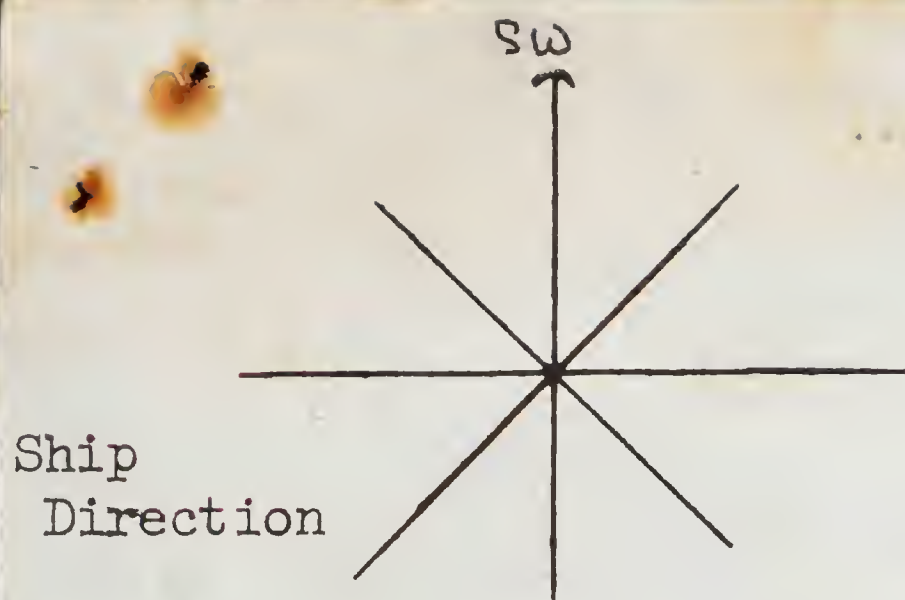
NORTHERN GRID, DIURNAL
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 18 FEBRUARY 1967
Pg. # 1

SPECIMEN
or

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0637					S.R. begin obs
0824	Bud sp.	1			probable Pterodroma but out on horizon and unable to tell; if Pterodroma it is one of the small ones.
0854	WHITE-RUMPED STORM PETREL	1	NRW		
0854	RFB	1	NRW		Ad
0955	? Pterodroma	1	NRW		WHITE BELOW, TRAILING EDGES OF UNDERWINGS DARK, WINGS & BODY DARK BROWN ABOVE, SMALLER THAN RFB, ABOUT WTS SIZE BUT LIGHTER COLORED
1000	FRIGATE SP.	2	©		
FF 1012	SOOTY TERN	30 ± 5	©		FEEDING FLOCK WHEN FIRST SEEN, THEN MOVE HIGHER & AWAY FROM SHIP TOWARD SOUTH
FF 1030	SOOTY TERN	100 ± 10			} FEEDING FLOCK - MOVE UP AND AWAY FROM THE SHIP IMM AMONG SOOTIES - COME TOWARD & FLY AROUND THE SHIP SOAR ABOVE SOOTIES "LOOK US OVER"
1030	RFB	3			
1030	GF	1			
1112	P. externa cervicalis	1	SE		see well
1130	RFB				2 imm - probably same as above
1131	RFB	1			Sub Ad.
1132	H. Frigate	1			Light on edge of squall
1133	Sooty tern	2	SE		
FF 1135	" "	7	SE		Feeding All Adults
FF 1140	Sooty tern	50 ±	5		
	Great Frigate				Same as above
	RFB				Same as above
1200	Sooty tern	2	SW		
TF 1205					
1227	RFB	1			LT Chasing - ob bird in Sooty tern 35 RFB 1 - sad
1400	WTTB	1	©		Ad - over ship Ad calling over ship 1400-1600 ob. faint
1615	FRIGATE SP.	1	NRW		circling + dive down toward water, THEN UP HIGH AGAIN
1630	Pterodroma SP.	1	NRW		BROWN ABOVE - LIGHT BELOW
1810	WTTB	2	NRW		} over ship
	RFB	1	NRW		
1820	RFB	1	NRW		subad 1825 - STOP OBSERVATIONS



OBSERVERS:

Fitch

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

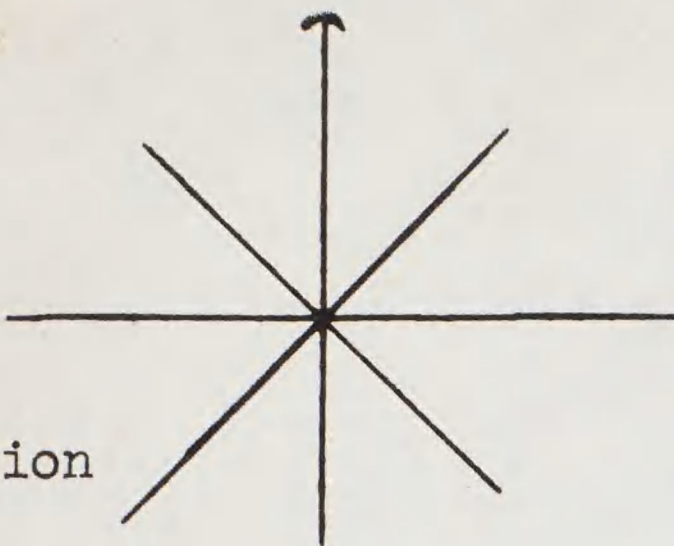
SPECIMEN DIURNAL GRID
or LT 2087

Date 18 Feb. 1967
Pg. # 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0800					commence watch
0808	G. Frigate	1	☉		
0825	RFB	1	NW		
0846	Pterodroma sp.	1	☉		possibly JFP
0857	RFB	1	NW		adult
0910	WRSP	1	NW		
0913	G. Frigate	1	☉		female possibly subadult or immature because of mottled brown and white appearance of breast feathers - feeding when first approached, individual was flying at approx. 100 ft. and would swoop down barely touching surface of water to catch flying fish - from a distance, resembled feeding behavior of WTTB except that frigate never dived into H ₂ O - after being disturbed by ship, it flew off to NW.
0925	RFB	1	NW		adult flying just above H ₂ O
0930	RFB	2	NE		1 adult, 1 immature (immature following adult - flying from 3 to 7 ft. above H ₂ O).
0940	RFB	1	NE		Subadult
0951	Bird sp.	1	☉		on horizon - moved off out of sight
0958	Bird sp.	1	☉		" " "
1000					Close watch
CC 1314	BFB	1	☉		Subadult following ship - # 110057
1400					Commence watch
1432	RFB	1	NE		adult
1449	Phoenix Isl / Tahitian	1	NE		
1450	RFB	1	☉		subadult - observed chasing flying fish
CC 1505	RFB	1	☉		subadult # 110058
1614	RTTB	1	☉		sitting on H ₂ O
1618	G. Frigate	1	☉		
1620					Close watch for dinner
1640					Open watch
1646	RFB	1	NE		immature
1735	WRSP	1	☉		
1745					Along side AG-39
1800					Close watch

Entered into ADP System.

Ship
Direction



Nocturnal Bird
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN
or

End of First leg So. E 3 hrs.
8 hrs. long.

~~28 Feb~~ OBSERVERS:

Sch. 2000-2400

Fitch 2400-0400

Dubong 0400-0800

Date 18-19 Feb.

Pg. # 1

TIME SPECIES # DIR. BAND NO. REMARKS

2130

WTTB

1

SE

CALL OVER SHIP

2145

RFB

1

imm fly by

2300

ST

3

fly overhead - inside - a wake

+ 2400

0400

1:10. Lm Lt

0615

M. Fingert

1

0630

Pterodroma
sp.

1

SE

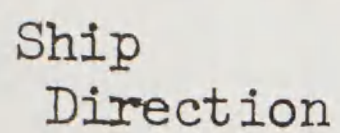
0645

Birds

1

0647

Sunrise End North.



SPECIMEN NOCTURNAL GRID
or LT 2087

Fitch

18-19 Feb 6?

Date 19 Feb. 1967

Pg. #

SI-MNH-958-e
Rev. 5-66

Pond
 19 Feb
 Observing conditions
 on very poor due to moderate
 rough seas. So much motion T. Fish
 was unable to see. Various for swimming
 comparisons made with this in mind.

19 Feb

0800 - 1000

P	0811 -	REB - 1 -	
P	0837 -	" - 3 -	NE SAP
S	0856 -	" - 4 -	SAD
P.	0907	" 1 -	-

0932 - Rain began

P-S 0938 -
P) F Rel
~~P) F Rel~~

P-S 0944

+ (Juan-Fernandez Petrel)
 P. rostratus/alba - 1 - (Phon/tahet Pol)

Watch Boobies!

19 Feb

LT - Fitch

hypoleuca m.

P. ~~leucosternus~~ - 1 - B-W Pel

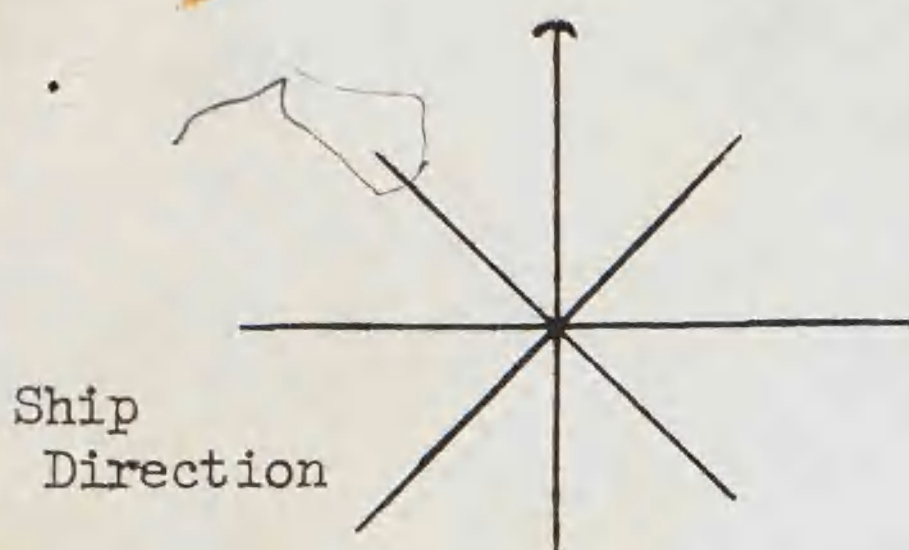
Plumier - 1

1400-1600

~~1600-1800~~

ME - 1

RFB - 1



Ship
Direction

Dinner. Guild YAG 39
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 19 February 1967
Pg. # 1

SPECIMEN

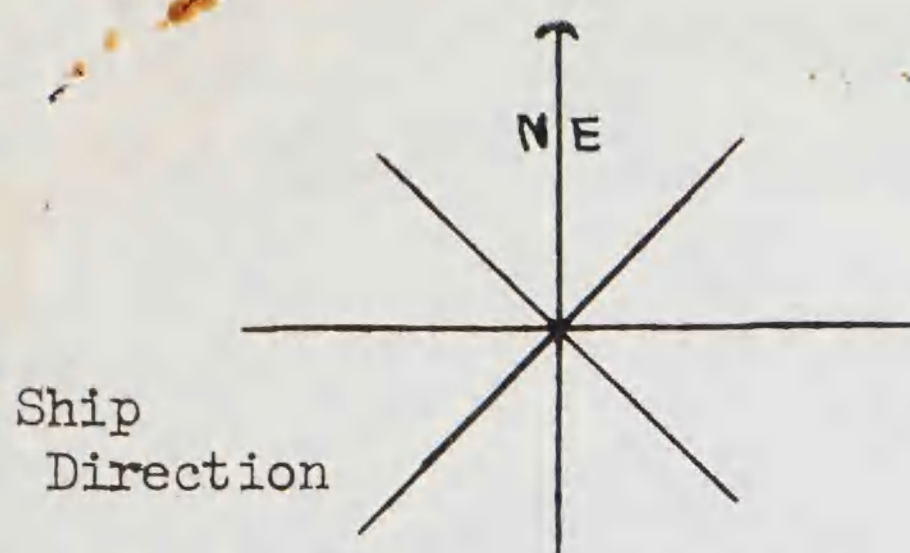
or

TIME SPECIES # DIR. BAND NO. REMARKS

	0647				S.R. Begin
	0658	WTTB	1	E	
	0710	RFB	1	SS	Immature
	0715	RFB	1		
		H Frigate	1		Immature - feeding
					Ad ♀ Parasitizing the above birdy.
					Followed it and dived on it once.
					Were observed for 10 min
	0800				
	0810	WRSP	1	SS	Turned N on second leg.
P	0815	PHEONIX/TH PETREL	1	W	TRAVEL EAST
A.P	0840	RFB	4	NR	1 imm
	0850	RFB	1		imm, probably one of above
S	0900	RFB	1	NR	imm
P	0940	PHEO/TH PETREL	1	NR	
P	0957	WTTB	1	NR - W	nd
	1028	Bird sp.	1	?	Stayed for short time!
	1145	BFA	1	SS	
	1215	WTTB	1	NR	over 700
	1230	Bird sp	1	SS	
	1235	G.F.	1	NR	imm - high above ship
	1645	BIRD SP.	1	SS	
	1755	BFB	1	NR	SUBAD - FOLLOW SHIP - P+R black, COVERTS WHITE + BLACK MOTTLING, HEAVY IN BACK, HEAD + BREAST, BODY WHITE, NO MOTTLING.
	1810	RFB	2		1 Ad, 1 imm
	1828	Bird sp	1		SS close Dinner.

(Eastman base with
LT on Starboard Beam
1/4 mi away)

1400-1600 Fitch from LT



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Fitch

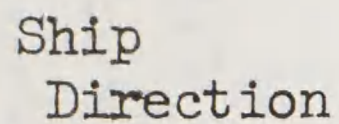
SPECIMEN
or

DIURNAL GRID
LT 2087

Date 19 Feb. 1967
Pg. # 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0800					Commence watch
0811	RFB	1	☉		starboard of LT
0837	RFB	3	NE		subadults starboard LT
0856	RFB	4	☉		subadults port LT
0907	RFB	1	☉		port LT
0932					Rain squalls began
0938	Pterodroma (large)	1	☉		probably JFP: gray w dark w across back, white undersurface, underwings: linings white, black spot at wrist, dark patch around eye - (did not have white nape of WNP)
0944	Phoenix Isl./ Tahitian Petrel	1	☉		dark brown upper surface, dark breast band on white breast
0945					Rain squall ended
1000					Close watch
1400					Commence
1422	Pterodroma (small)	2	☉		possibly BWP - upper parts gray, white under parts including coverts, inverted "w" across wings, underwing white w thick dark edge - did not appear to have dark gray cap as in WWP
1423					Rain squall begin
1428					Rain squall ended
1428	RFB	1	☉		subadult
1435	Phoenix Isl./ Tahitian	1	☉		
1503	G. Frigate	1			
1600					Close watch
1800					Commence watch
1828	RFB	1	☉		following ship
1913	WRSP	1	☉		
2000					Close watch

Entered into ADP
for Mink.



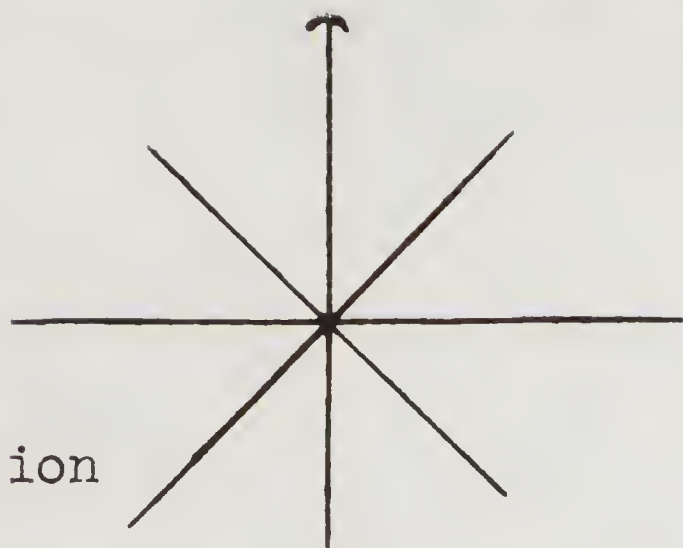
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

0000 → 0400	DeLong
0400 → 0641	SCHREIBER

Date 19-20 Feb. '67
Pg. #

SPECIMEN
or

SI-MNH-958-e
Rev. 5-66



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN Nocturnal Grid
or LT 2087

OBSERVERS:

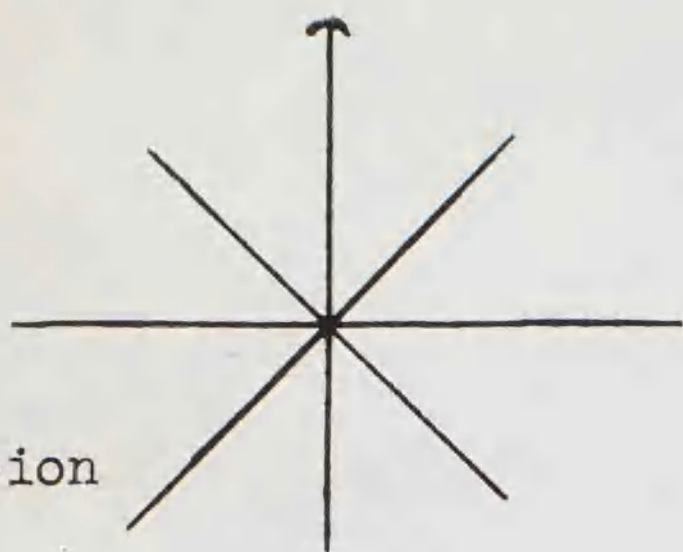
Fitch

19-20 Feb 1967

Date 20 Feb. 1967

Pg. #

[illegible]



Ship
Direction

Depart Maitah 1000

0930

DIURNAL GRID

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

20 Feb
1

Date
Pg.#

SPECIMEN
or

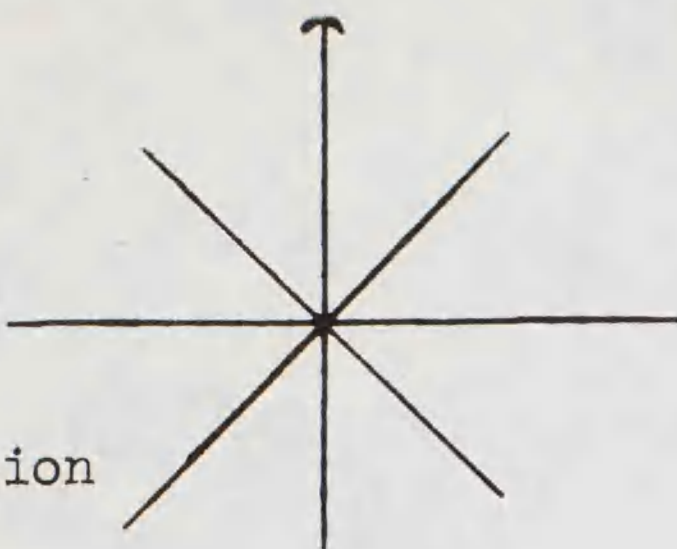
	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
	0641					SUNRISE
	0800	WTTB	1	NW		ADULT
	0932	BFB ?	1	NW		Ad - [I THINK JOHN SAW IT]
TF	1045	Sooty tern	5	NE		
	1050	RF Booby	2	S		Ad.
	1055	RF Booby	1	SE		following - SAL
	1155	RFB Booby	1	SE		imm
	1230	RTTB	1			following ship
	1244	RFB	2			imm OVER TAKE SHIP TOWARD SI
FF	1324	ST	175±			} FEEDING FLOCK
		FT	3			
		RFB	6			
						3 ad 2 sub 1 imm
	1329	RFB	1			ad sitting on water
	1600	RFB	1			Ad
	1605	RFB	8			6 Ad, 1 SAd, 1 imm.
	1625	RF Shear.	1	SE		
FF	1630	Sooty tern	35±10			
		Mc Frigate	1	NE		
	1810	RFB	2	NE		PAIR OF AD
	1811	RFB	3	NE		2 ad, 1 sub
	1812	RFB	1	NE		imm
	1820	RFB	25	NE		FLOCK MOVING TOWARDS SI
FF	1822	SUNSET				STOP OBSERVATIONS

1400-1600 LT - Pitol

COUNTED 100+ RFB
MOSTLY AD. FLYING
UPWIND TOWARD

LT. 7
PFB

Ship
Direction



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

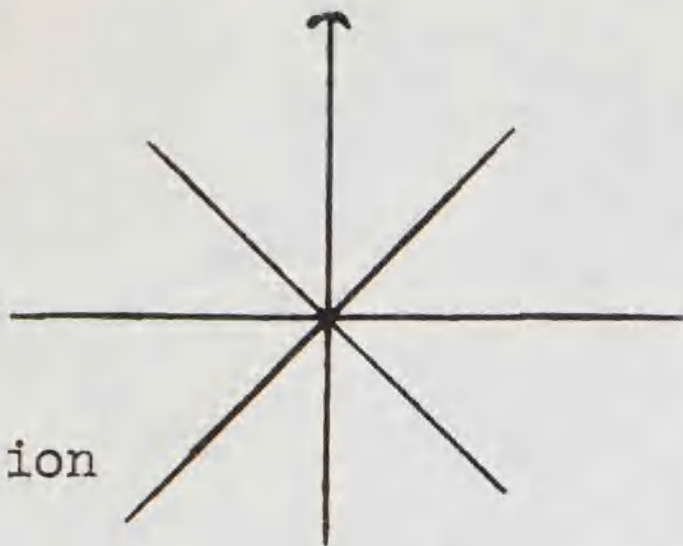
Fitch

Date 20 Feb. 1967
Pg. # 1

SPECIMEN DIURNAL GRID
or
LT 2087

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0800					Commence watch - leaving Northern Grid Tract
0820	RFB	1	☉		following ship
0842	G. Frigate	1	☉		
0932	BFB	1	☉		subadult
0937	Bird sp.	1	☉		
0943	Bird sp.	1	SW		probably Tropicbird Sp.
0958	RFB	1	☉		adult
cc 1355	WTTB	1	☉		collected #110054, blood sample taken
1420	RFB	1	SW		
1426	WRSP	1	☉		
1523	Tropicbird Sp.	1	☉		following ship
1546	WRSP	1	☉		sitting on H ₂ O
1600					Close watch

SW

Ship
Direction

Entered Grid 2213

OBSERVERS:

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

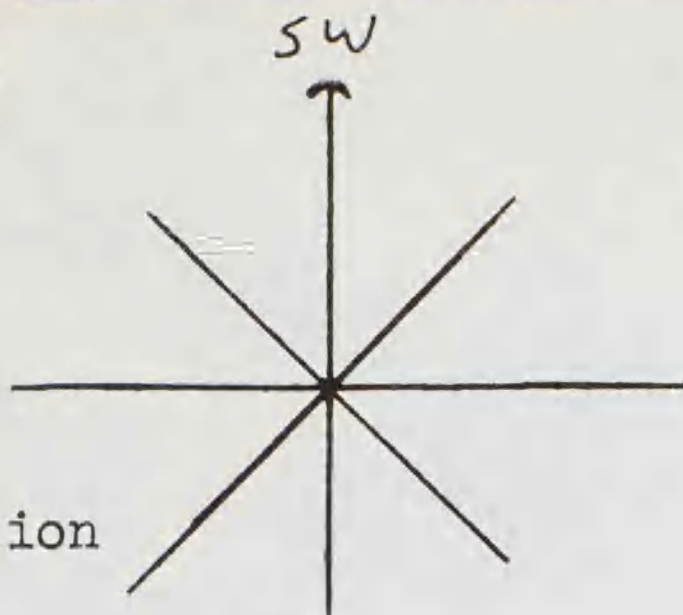
20-21 Feb 1967

SPECIMEN NOCTURNAL ~~ST~~
orDate 20th FEB
Pg. # 1

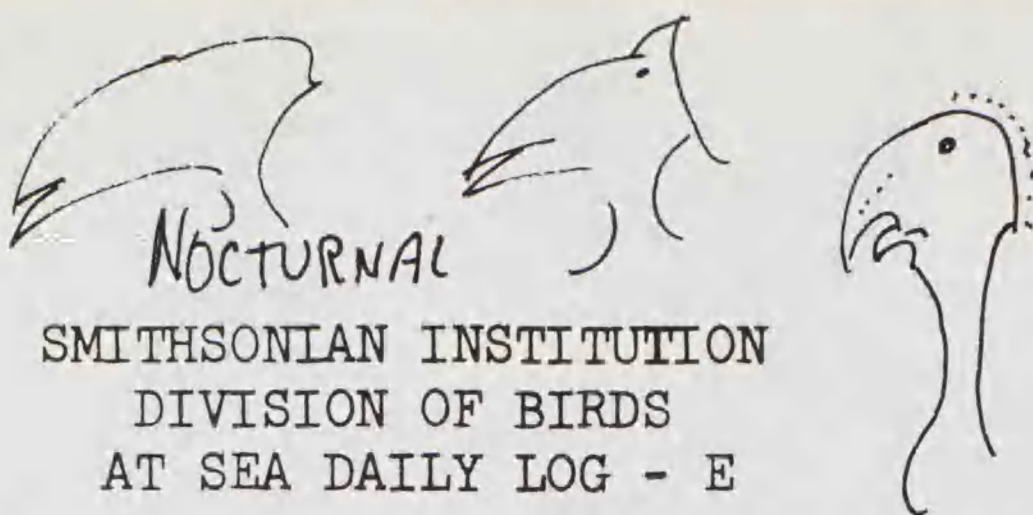
TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1822	Sunset				Begin nocturnals
1915	ST	1			VOCAL
1935	ST	2			VOCAL
2036	ST	6	?		Vocalization - heard for 8 min.
2055	ST	1	?		" " " " 2 min.
2108	ST	3	?		" " " " 3 min.
2125	ST	2	?		" " " " 4 min.
✓ 2132	RFB	1	⊙		Following ship - 2137 landed on ship's radar mast - individual immature and unbanded
2141	ST	4	?		Vocalization - heard for 2 mins.
2153	ST	2	?		" " " " 2 mins
2159	ST	2	?		" " " " 3 min.
2207	ST	1	?		" " " " 2 min.
2214	ST	3	?		" " " " 5 min.
2227	ST	?	?		" " " " 7 min.
2239	ST	?	?		" " " " 10 min.
22 ⁵⁴	ST	?	?		" " " " 3 min.
TF 2316	ST	175 ± 25 150-200			large flock - total of 78 counted w top searchlights from 2316 to 23 ⁵⁴ - estimated no.: 150-200 - visual observations, Sooty Terns flew in from SW to NE and circled ship several times before flying on
2317	RFB	1			
2400	RFB	4			IMM FLYING NE, ONE ATTEMPTS TO LAND ON MAST BUT GONES ON, SEEN AROUND SHIP FOR NEXT HALF HOUR
0025	ST				FLOCK SEEMS TO HAVE LEFT THE SHIP - BUT BIRDS STILL PRESENT, IN FEWER NUMBERS, PAIRS SEEM PREVALENT
0045	ST				ONLY 1-2 INDIVIDUALS REMAIN - IS THIS FLOCK MOVING BY SHIP OR STAYING WITH US?
0050	RFB	3			AD - FLYING NE
0057	RFB	11			AD FLOCK, FLEW BY, CLOSE IN TO SHIP NEAR LIGHTS, THAN CONTINUE NE
0058	ST				ONLY 5-10 AROUND SHIP, FURTHER AWAY, IN PAIRS + ALONE
0130	RFB				INDIVIDUALS AROUND SHIP - ARE THEY THE SAME?

Begin Grid

(175 wad)
(175 wad)



Ship
Direction



NOCTURNAL
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

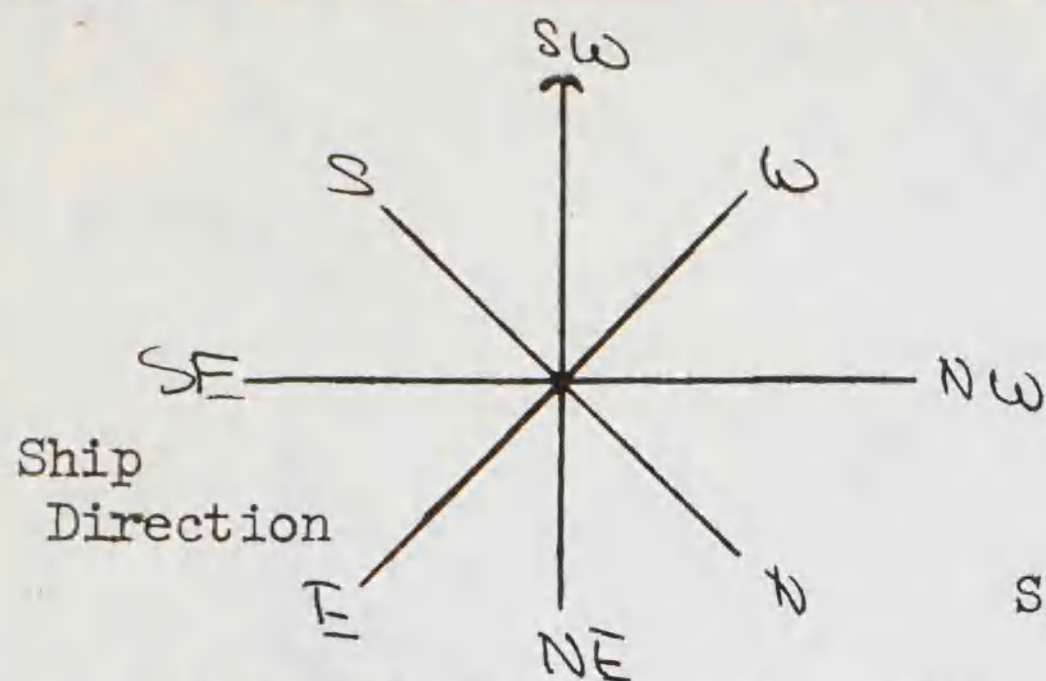
OBSERVERS:

Date 20th FEB
Pg.# II

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

0135	RFB	1			SUBAD near mast, then continues NE
0137	ST	50-100			#s INCREASED AGAIN, EST 50-100, STATIONARY OVER BOW OF SHIP + MOVING OFF TO SIDES + TOWARD STERN
0210	ST	h			#s DOWN TO 4-6 OFF BOW OF SHIP
0250	RFB				ANOTHER SUBAD LANDED ON MAST - AFTER DISPLACING EARLIER ONE WHICH MOVED TO FORWARD MAST, THEN BACK TO MAIN
	ST				SINCE 0215 EST. 15-20 AROUND SHIP - BOTH FORWARD + TO SIDES.
0345	ST	2		10	GRADUAL DECREASE IN #s LAST HOUR, QUITE NOTICEABLE IN LAST 10 MIN TO ONLY 2-3 BIRDS HEARD NEAR SHIP
0415	ST				INTERMITTANT OVER + AROUND + AWAY FROM SHIP, MORE AWAY THAN NEAR
0425	sooty tern	4			
0530	sooty tern	1			
0647					S.R. Close obs.



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN JOURNAL - *Hand*
or

OBSERVERS:

DeLong 0647-0800

Fitch 0800-1000

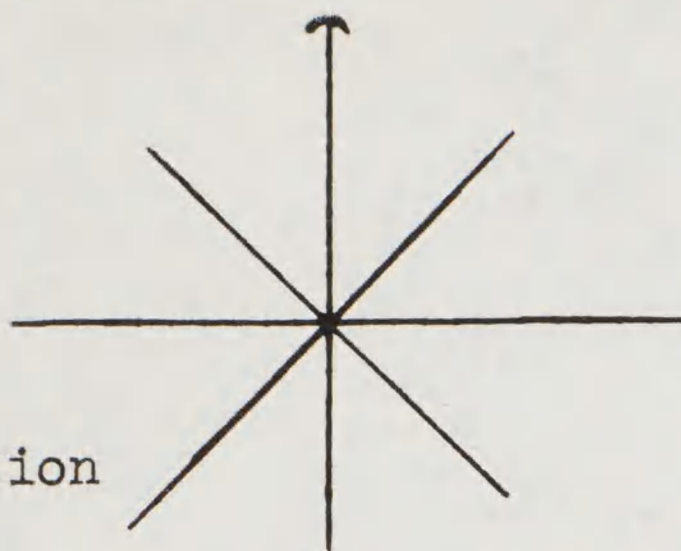
Schreiber 1000-1200

Date 21 Feb '67

Pg. # 1

TIME SPECIES # DIR. BAND NO. REMARKS

0647					SR begin Obs.
0716	RFB	1	SSS		Imm
0740	RFB	1	SSS		Ad.
0759	RTTB	1	SSS		
0800			SSS		above ship
0807	WRSP	1	NW		course 228
0814	BB	1	S		adult
0845	RTTB	1	NW		to flying low feeding
0855	BFB	1	SSS		
0856	Phoenix Isl./ Tahitian Petrel	1	SSS		
0927	BB	1	SW		adult
1055	RTTB	1	SSS		Ad, overshoot, from S then continues SW, stays near ship, low on water, lands twice in next 10 min
1725	WTTB	1	SW		
1745	RFB	1	SSS		Ad, CIRCLE OVER SHIP subad(?)
1838					Sun Set.



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN *Nocturnal*
or *swind*

OBSERVERS:

Date ²¹⁻²² *21-22 Feb*
Pg. # *1*

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
------	---------	---	------	----------	---------

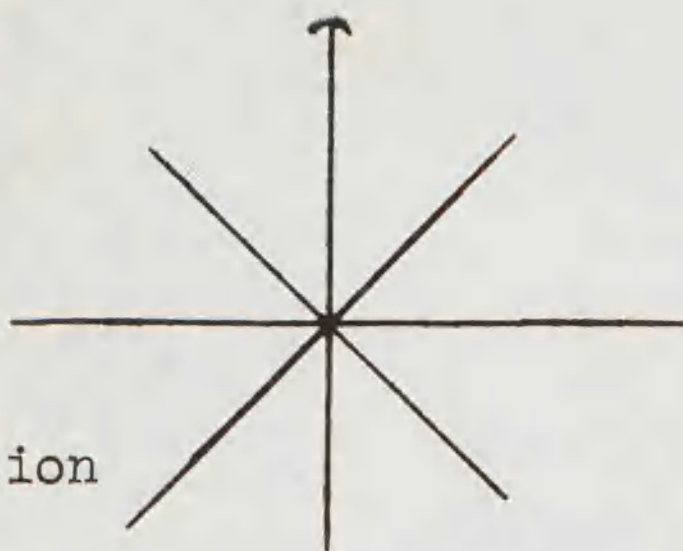
1838

begin Nocturnal

0644

end Nocturnal

Ship
Direction



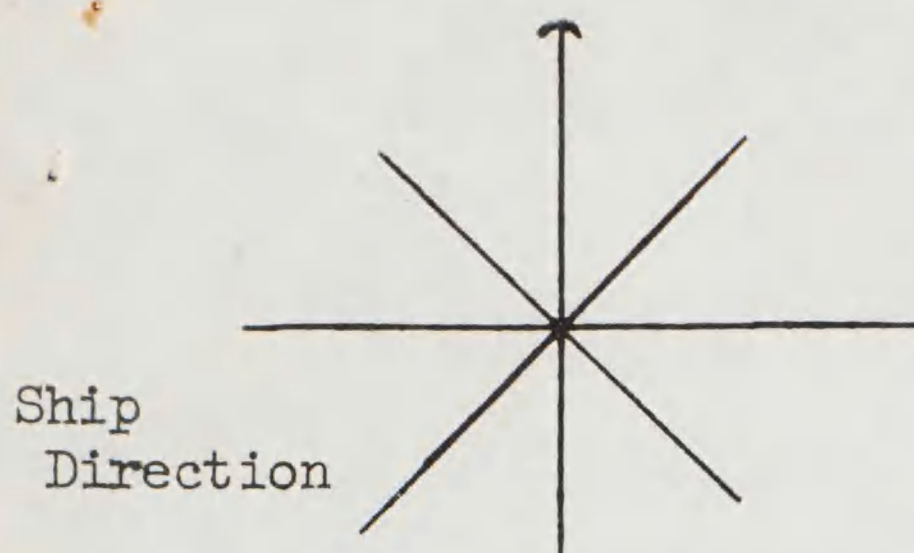
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date ²² Feb 1967
Pg. #

SPECIMEN or DIURNAL GRID

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0645					Sunrise - commence watch
0726	WRSP	1	☉		
0758	Tropicbird sp.	1	☉		seen on horizon
0820	CIShear	1	888		
FF 0905	Sooty tern	15			
	Pterodroma	2			1 Phoenix / Laysan Pet (Dark body, white belly, with white underwings bordered entirely by narrow black. Fine pattern behind eye. Imm. Another that was much more mottled. With white black borders on the underwing, more black about face.
	RF Booby	1			
1030	BIRD SP.	1			
1042	RFB	1	W		IMM
FF 1055	ST	85±10 100±10			FEEDING FLOCK, NO OTHER BIRDS SEEN
1110	Phoenix Pet? JUAN FERNANDEZ PETREL	1	W		DARK BROWN ABOVE, WHITE BELOW, TIPS OF WINGS UNDERNEATH DARK
1210	RF Booby	1			5 Ad
1245	RF Booby	1			turned S on 5 th /7.
1340					Imm
1346	UTTB	1	888		Ad.
1418	RFB	4	N		3 imm; 1 S Ad
1450	RFB	1			following - Ad.
1535	Gr. Frigate	1	888		
1556	RFB	1			high above water - searching? Imm Searching (Booby under frigate). Booby dived once beside a porpoising Mahimahi



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

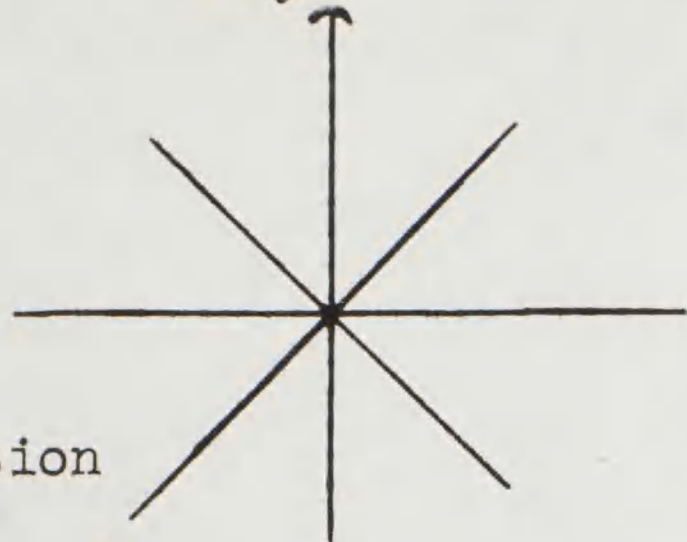
22 Feb

Date 22 Feb.
Pg. # _____

SPECIMEN
or

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1655	W Frig.	1	SE		Male - observed searching and seen to dive three times & feed once. Observed for duration 30 min.
✓ 1723	RFB	3	⊙		subadults
1738	RFB	2	⊙		1 adult, 1 subadult: followed ship for 5 min., then both landed on the water
1744	RFB	1	⊙		subadult following ship
1819	BFB	1	N		Subadult
1834					SS - close distant obs

240

Ship
Direction

NOCTURNAL GRID
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

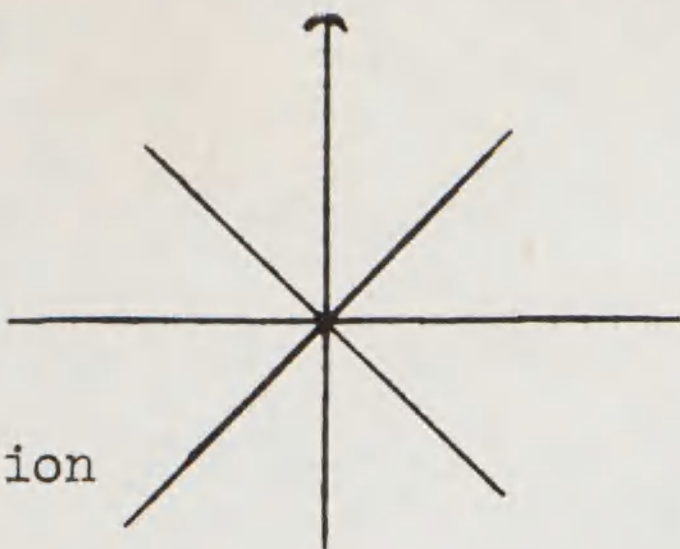
Date 22-23 Feb
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

1835					SUNSET
1836	RFB	1			imm, same as earlier
2000					LANDED ON AFTER MAST
2200	2400				PREEN, SLEEP
0545					No Activity
					COURSE CHANGE TO 045°
					WHEN CHANGE RFB ON AFTER MAST-TURNED
					AROUND SO FACE WIND AGAIN -
					WIND FROM 095°
0654	SUNRISE				
0730	FRIG. SP.	2			FEEDING LOW ON WATER; CLOSE TOGETHER, SOME CHASE

Ship
Direction



DIURNAL GRID
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E


OBSERVERS:

Date 23 Feb '67
Pg.# 1

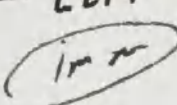
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS


0655 SUNRISE BEGIN OBSERVATIONS

0730 FRIG. ~~SP~~ 2  feeding pair ♂ & ♀ ✓


0745 GF 1  ♂ low on water

0800 RFB CHANGE COURSE TO 055°
0800 LEFT AFTER-MAST, AWAKE AT 0707 + SPENT
 ALMOST AN HOUR PREENING + LOOKING
AROUND.

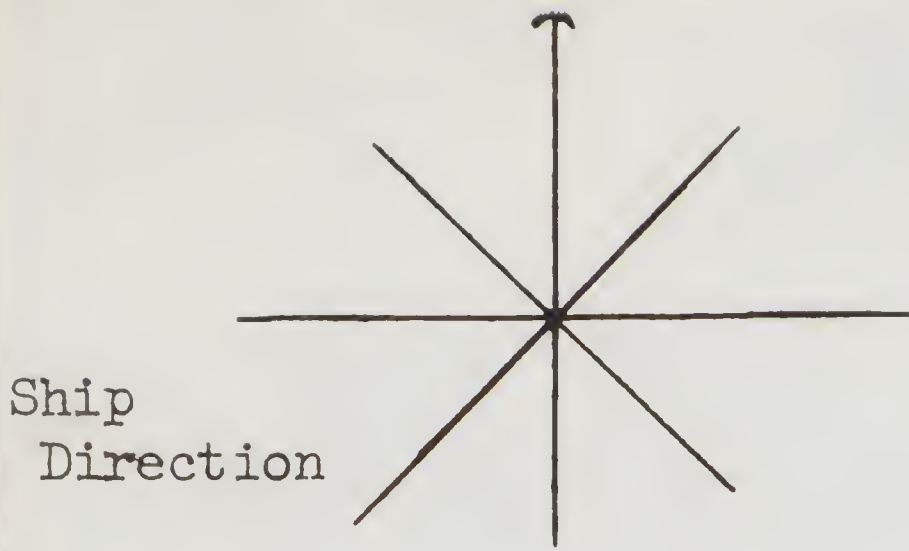
1017 M. Frigate 1 high above water

1044 WRSP 1 

1550 M. Frig. 1 Ad ♂
+

1758 WRSP 1 

1835 SS - close diurnal



Ship
Direction

Nocturnal Grid
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Out of
GRID at 2235
in grid
until sunrise

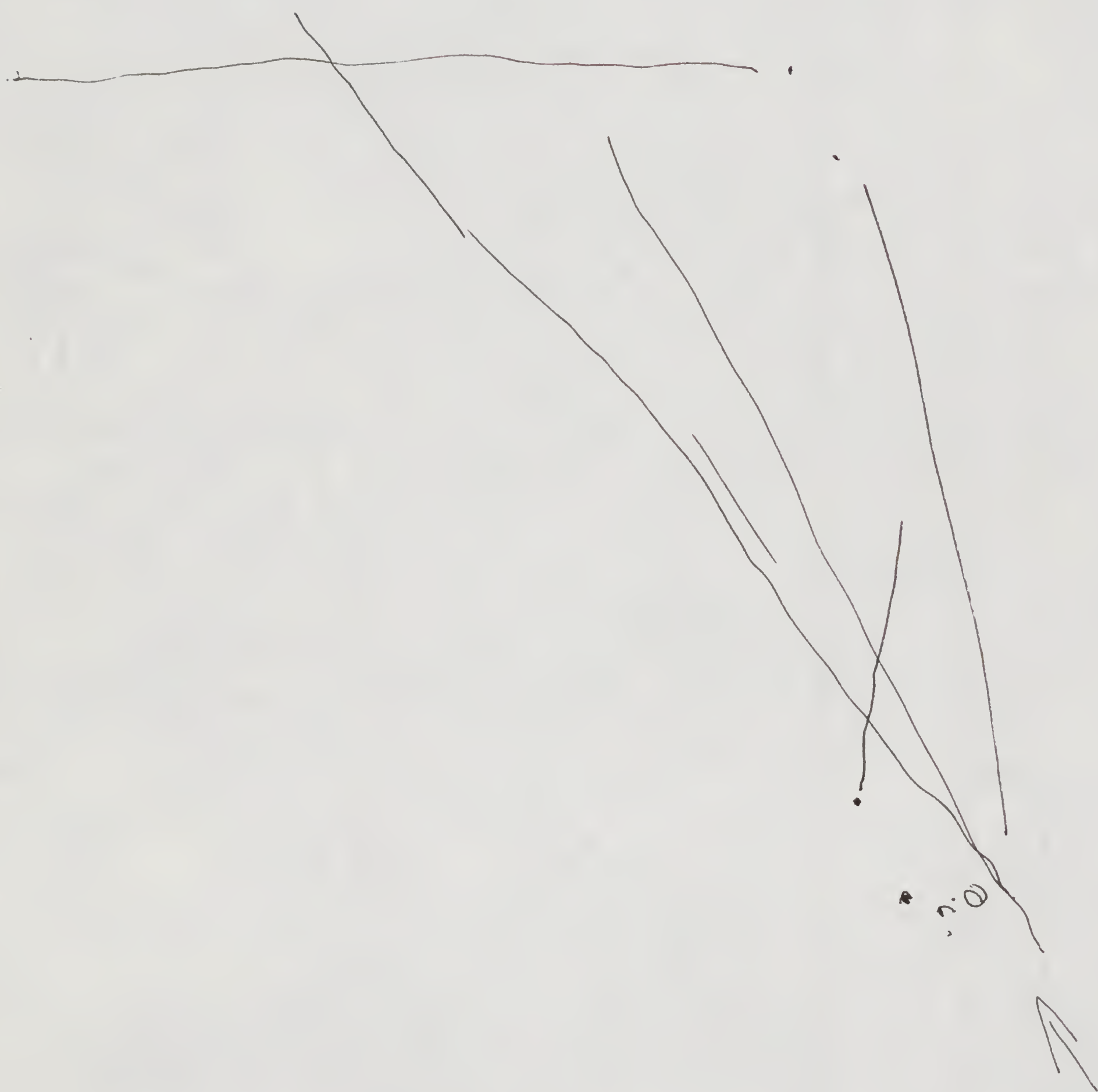
Date 23-24 Feb '67
Pg. # _____

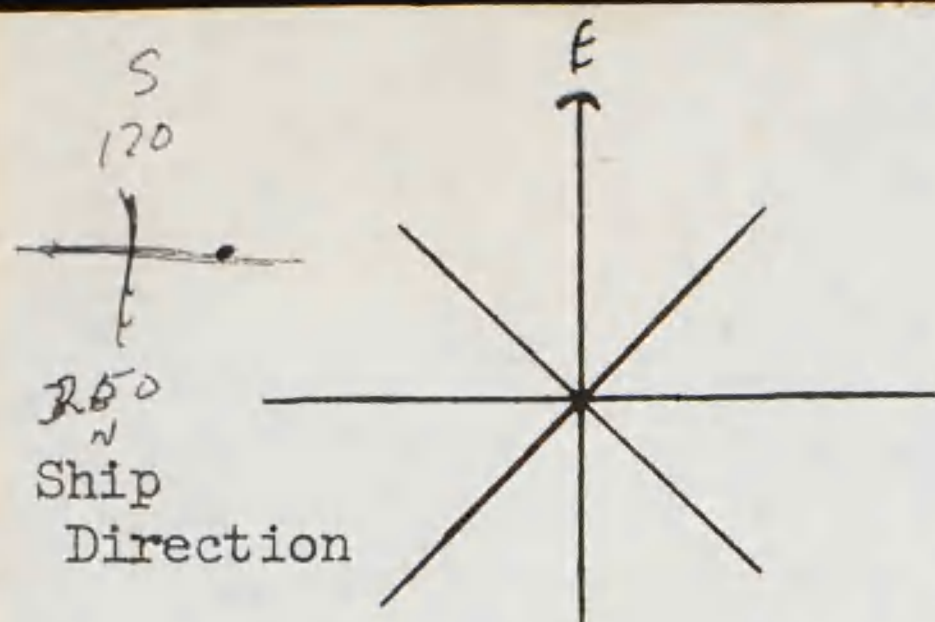
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

1835					Sunset
0341	Sooty Tern	1	⊙		vocalization
0710	SUNRISE				

LOST AN HOUR DURING
NIGHT.





JOURNAL
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 24 FEB 67
Pg.# 1

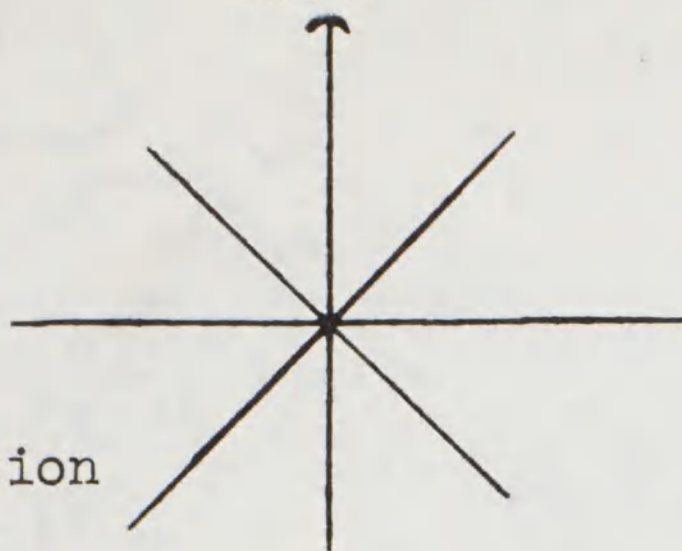
SPECIMEN

or

TIME SPECIES # DIR. BAND NO. REMARKS

	0740	SUNRISE				
	0743	RFB	1	NE		imm
	1115	RFB	1	⊙		Subadult
	1152 1252	RFB	1	⊙		adult - circling ship
	1220	Gr. Frigate	1			
	1315	RFB	1	SE		Imm
	1320	Gr. Frig	1	NE		
FF	1410	Sooty Tern	35	SE		
	1627	G. Frigate	1	⊙		
	1631	RFB	1	⊙		immature
FF	1645	Sooty Tern	100 ± 10	⊙		} feeding flock - moved NE after being disturbed by ship
		Fairy Tern	6	⊙		
		BFB	2			
		RFB	4			
	1700	GF	1	E		
	1708	RFB	2	E		sub + imm. flying E, low on water
	1710	RFB	3	SE		Ad
	1712	Sooty Tern	2	SE		Traveling
	1714	RFB	2	NE		TRAVELLING
FF	1735	SOOTY TERN	25			} FEEDING FLOCK
		RFB	2			
	1755	RFB	3	SE		1 adult, 2 subadults - traveling
TF	1758	Sooty Tern	18 ± 2	E		traveling flock moving East
	1809	G. Frigate	7	E		
	1810	RFB	6	E		1 adult, 5 immatures
	1835					
	1900	Gr. Frigate	2	SE		under way
	1905	Phalarope Phalarope sp.	1	SE		Red?
	1920					S.S. End Diurnal

070°

Ship
Direction

NOCTURNAL
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

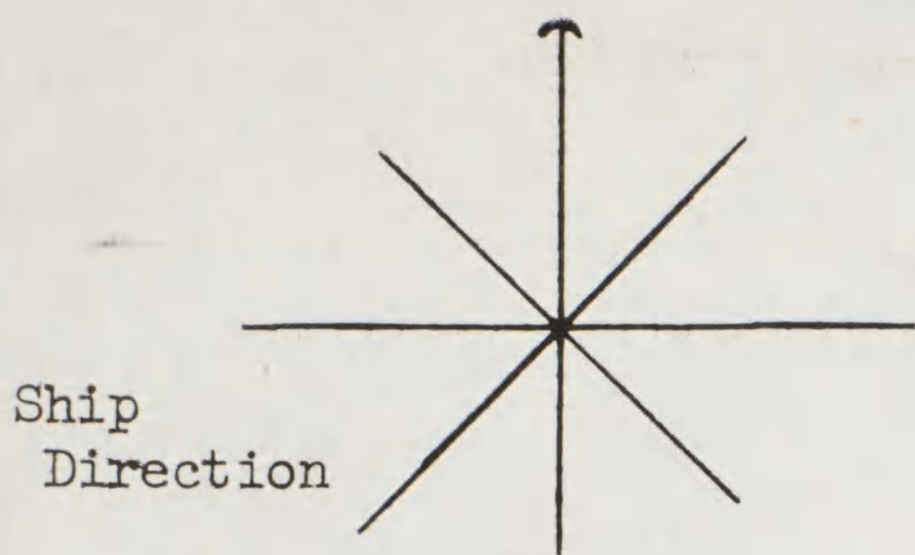
OBSERVERS:

Date 24 Feb '67
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

2000					BEGIN OBS.
2015	ST	1			flew over the ship - not heard ^{or see} any during next hour
2200					chirp
0100					on
0245					@ low



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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

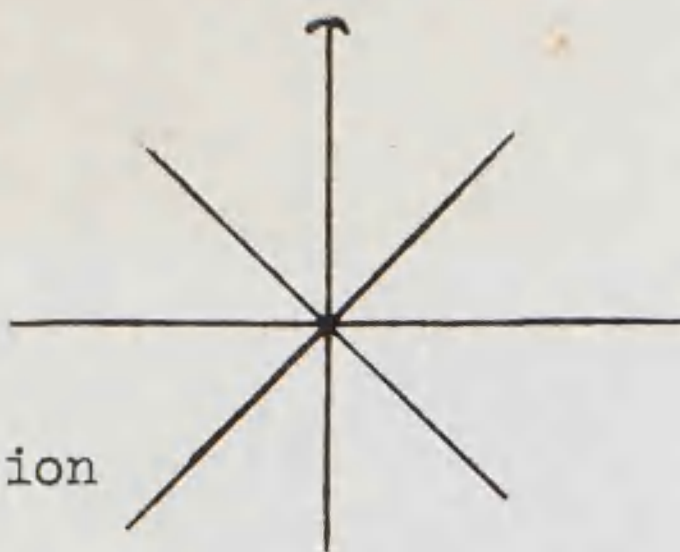
OBSERVERS:

Date 25 Feb '67
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

					nothing seen between 0645 and 0733
0733					SUNRISE, BEGIN OBS.
1019	RFB	1	⊙		adult
1350	RFB	1			
1519	WRST	1	NR		6000 LOOK!
1810	BFA	1	NR		Ad, behind ship
1900					SS clouds.



Ship
Direction

VAG 39.
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

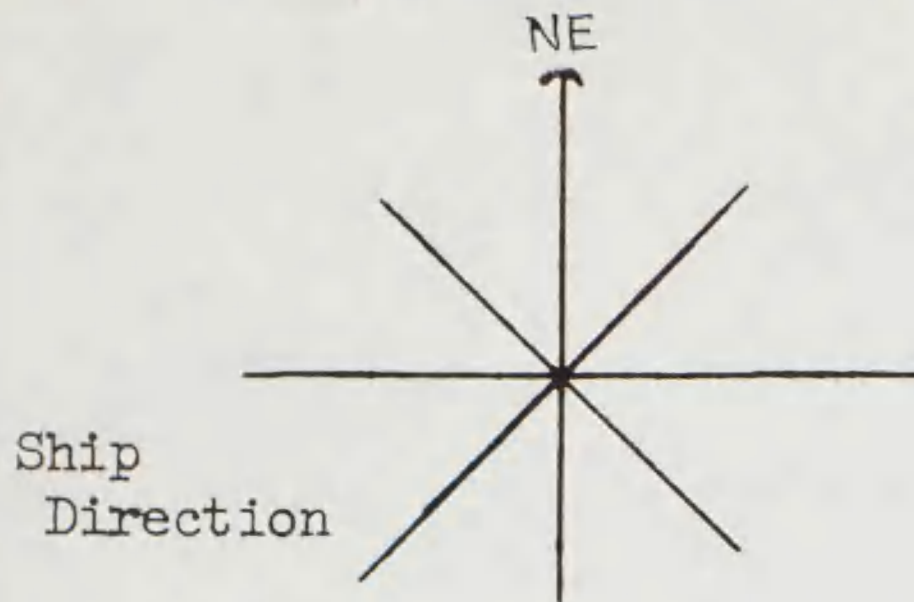
OBSERVERS:

SCHREIBER + DeLONG

Date 26 Feb
Pg. # 1

SPECIMEN
or

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0721	RUNSIZE				→ SUNRISE, BEGIN OBS.
0830	BFA	1	NR		Behind ship, [same as last night ???] [JUST APPEARED,
0830	RFB	1			DID NOT FOLLOW CLOSELY ALL NIGHT IF THE SAME]
SF 0855	WRS P	1			ON BDV OF SHIP [LOTS OF GUANO] BLOOD SAMPLE + RELEASE SUB AD.
SF 0858					Whole sp.
SF 0948	Sooty tern	10			I saw two SF to Port
0950	" "	12			Total of 22 ± 4 i about 1/2 mi
	Booby sp.	1			it continues to grow.
1100	RFB	1			Imm - fly in over ship
FF 1115	ST	15 ±			OFF PORT BDV,
1200	BFA	1	NR		FOLLOW SHIP
1232	GREAT FRIG	1	⊙		ADULT, MALE, VERY CLOSE, ABOVE SHIP
1258	RFB	1			AD, LOW IN TROUGH, MOVING PARALLEL TO SHIP, 3/4 mi to PORT
					From 12-1300 the tug has been
					at least 2 mi away - ranging to 5 mi.
SF 1430	Shear/Pet				@ 1330 it is 5 mi off S.B.
					Puffins or Pterodroma - seen for only
					an instant.
					1430 tug now coming within 1-2 miles of ship
					1445 " " 1500 yds. of S. Beam
1520	BROWN Boob	1			STARBOARD Beam, AD
1535	BFA	1	NR		behind ship, now 2 together
1555	BFA	1	NR		" " , now 3 "
1700	BFA	2	NR		" " , now 5 "
1836	RFB	1	NR		imm.
1855					Sunset



[LT 2087]

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Fitch

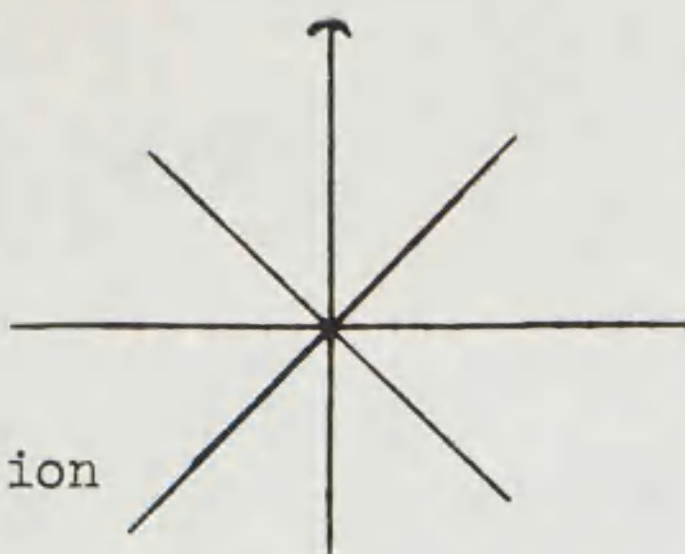
Date 26 Feb. 1967

Pg. # 1

SPECIMEN DIURNAL NON-GRID
or LT 2087

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
					Sunset - commence watch
0715					Close watch for breakfast
0730					open watch
0838	WTTB	1	SW		
0851	RFB	1	☉		adult
0857	BFA	1	☉		adult following tug
1101	RFB	1	☉		adult circling YAG-39
1115					
1215					Close watch for lunch
1227	G. Frigate	1	☉		open watch watch
1236	Bird sp.	1	☉		observed feeding while flying just above H ₂ O
1254	RFB	1	☉		on horizon
FF 1302	Tern sp.	30 ± 5	☉		} feeding flock, moved off to NE when disturbed by ship.
	Common Noddy	9	☉		
	RFB	4	☉		
1336	G. Frigate	1	☉		circling high
1434	Bird sp.	1	☉		on horizon
1508	B.B.	1	☉		circling ship
1510	BFA	2	☉		adults following ship.
1550	Bird sp.	1	☉		on horizon
1600					close watch for dinner

Ship
Direction



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 27 Feb '67
Pg. #

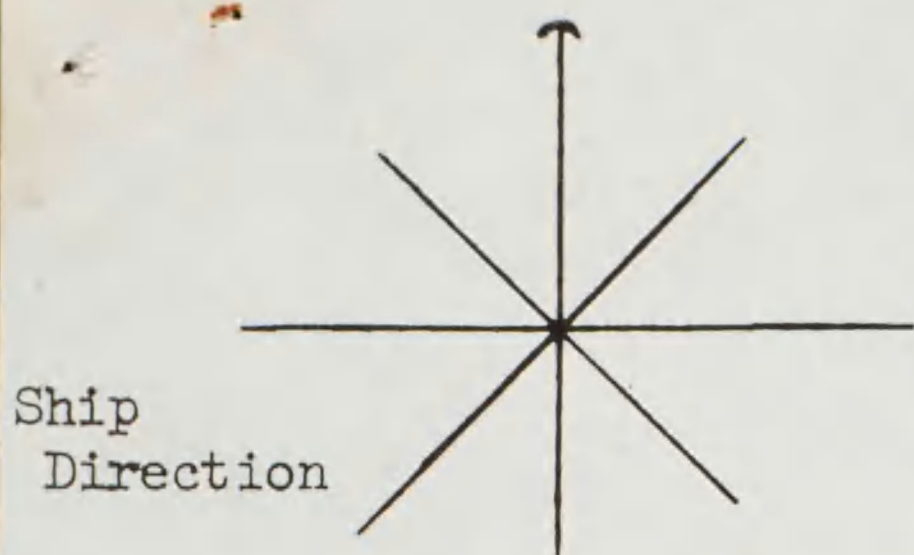
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

0705					Sunrise
0705	BFA	7	☉		adults following ship
0711	BFA	4	☉		2 adults, 2 immatures following ship
0712	Laysan Albatross	1	☉		following ship
0735					Entered squall
0754					Out of squall
0805	Shear/Pet.	1	☉		
0821					Enter squall
0834					Out of squall
0837	BFA	2	☉		adults following ship
0920					ENTER SQUALL
0925					LEAVE
0930	LAYSAN ALBATROSS	1	☉		FOLLOW SHIP, NOW TWO LA
0950	SOOTY TERN	4	~		AD flying by bow } NOT TOGETHER
0955	FAIRY TERN	1	~		" " " " }
1026	BFA	1	~		TOTAL COUNT OF 13 BFA & 2 LA.
1110	FAIRY TERN	1	☉		
1155	Fairy Tern	2	☉		flying by bow
1214	Fairy Tern	1	☉		
1255	G. Frigate	1	☉		
1325	Shear/Pet.	1	☉		
1446	BFB BOOBY	1			PARALLEL TO SHIP, AD
1510	SOOTY TERN	2	→		PAIR, FLY PAST BOW TO THE NORTH
1524	SOOTY TERN	9	→		FLYING NORTH IN FLOCK
	FAIRY TERN	1			FLYING NORTHWEST, AD ♂
1603	G. FRIGATEBIRD	1	↗		TOTAL OF 16 NEAR SHIP
1605	BFA				
1655	Sooty Tern	1	☉		adult
1834	RFB	3	☉		following ship - subadult
1845					Sunset - close watch

49





SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

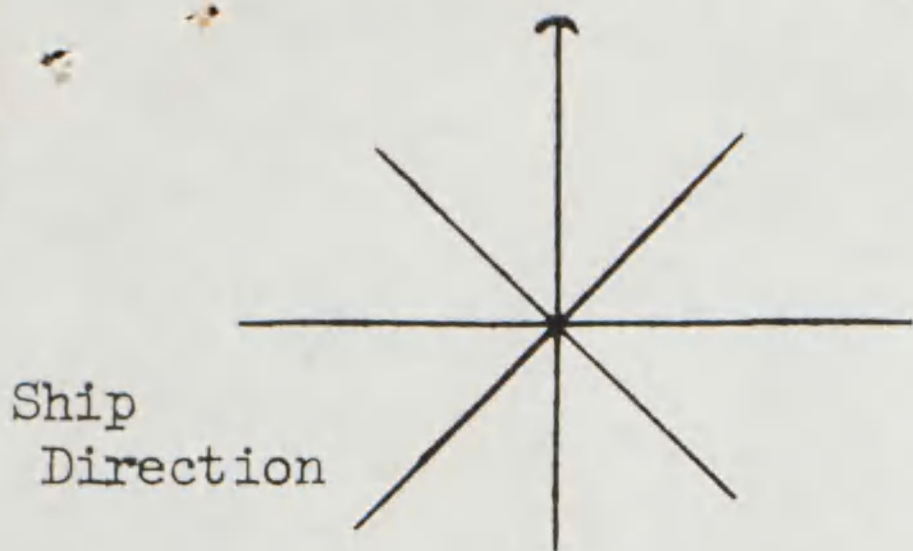
Schreier

Date 28 Feb 67
Pg. # 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

	0657	BFA	9			Following Ship
		LA	1			" "
	0750	Pomarine Jaeger	1			imm.
	0825	BFA	3			F.S. total 712
	0850	P.J.	1			Ad
	1010	WRSP	1			
	1026	W-B Tern	2	N		
	1035	W-B Tern	1	N		
FA	1041	Sooty tern	120 ± 10	88		
		W-B Tern	15 ± 3	"		
		RFB	3	"		
		Fairy tern	4	"		
TF	1055	Sooty tern	44 ± 3	E		
	1108	WTTB	1			
	1130	WRSP	1	88		Following Ship
	1132	RA/B	1	⊙		S Ad.
TF	1140	ST	6	E		
	1200	BFA	3			F.S. total 15
	1205	ST	3	88		
	1210	P Jaeger	1	E		A.D.
	1243	" "	1			
	1243	BFA	2			FS - total 17
	1312	P. Jaeger	1	WSW		Ad.
	1330	"	1	88		sn d
	1350	"	1	88		Ad; dark phase
	1415	P. Jaeger				
	1515	Sooty tern	2	W		Ad
	1535	RFB	1			



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Schreiber

Date 28 Feb '67
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

1537	RFB	2			Ad
1550	RTTB	1	E		
1551	RFB	1	F		Ad
1551	WTTB	1	E		Ad
1552	RFB	1	E		Ad
1552	S.T.	3	E		
1556	RFB	1	E		SPd
+ 1605	RFB	1	888		Sad.
1615	P. Jaeger	1			Ad.
1615	RFB				
1617	P. Jaeger	2			Ad.
1621	RFB	1			Ad
1656	RFB	1			Ad
1705	RFB	1			Ad.
1715	RFB				
1735	RFB	1	12		Ad

1740

close of morning Paul.

18
/